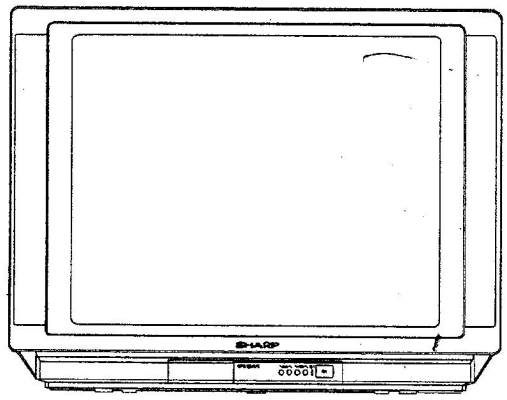
70DS-15S
70DS-15SN
C-7015S

SHARP SERVICE MANUAL

SELB70DS15S/3

CA100 - CHASSIS



PAL SYSTEM COLOUR TELEVISION

70DS-15S
70DS-15SN
MODELS **C-7015S**

In the interests of user safety (required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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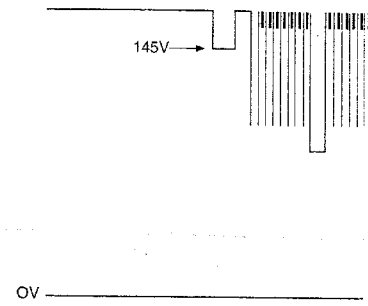
SHARP CORPORATION

SERVICE ADJUSTMENTS

All the adjustments required for this chasis will be done in Service Mode, except G2, IF PLL (AFT) and RF AGC.



• G2 ADJUSTMENT

1. Receive cross hatch pattern signal.
2. Set contrast to 80/100 and brightness to 40/100.
3. Connect the oscilloscope to the red cathode and adjust G2 to read 145V on the sensor pulse as in below drawing:

NOTE:
Osciloscope should be adjustated for vertical TV field trigger and synchronized with video signal.

• IF PLL ADJUSTMENT (AFT)

1. Disconnect antenna signal
2. Connect the output of SSG (Standard Signal Generator) to the tuner IF output terminal.
   - SSG output: 38.9 MHz (CW) ± 5 kHz
   - SSG output level: approx. 90 dBμV
   - Probe: Direct
3. Connect the digital voltmeter to pin 11 of IC 201.
4. Adjust the AFT coil (L 205) to obtain 4.5VDC on voltmeter.

• RF AGC ADJUSTMENT

1. Receive "COLOUR BAR" signal (UHF).
   - signal strength: 57 dBμV
2. Connect DC voltmeter to Test Point J91 (RF AGC).
3. Set AGC control (R224) to maximum position (memory).
4. Adjust R224 to obtain voltage of 0.1V below maximum voltage (step 3).

• SERVICE MODE FUNCTION

This mode function is provided to assist with the settings of those adjustment that may vary from one Picture Tube to another, or between models.

In order to use the Service Mode

1. Connect Test Pattern signal to antenna terminal.
2. Press main switch to "OFF".
3. Press volume-down and channel-up buttons and main switch to "ON" simultaneously.
4. Service mode is now entered.

The required adjustments can then be made from the Remote Control Unit.
The only buttons required are the following:
Up/Down-channel for movement in adjustment options menu; Up/Down-volume are used to carry out an adjustment in said menu; ON/OFF is used to memorize a new adjustment.

70DS-15S
70DS-15SN
C-7015S

ELECTRICAL SPECIFICATIONS

Aerial Input Impedance .....75 ohm unbalanced
Convergence .....Self Converging System
Focus .....Bipotential electrostatic
Audio Power Output Rating .....20+20W (M.P.O.)
Picture IF Carrier Frequency .....38.9 MHz
a) Sound IF Carrier Frequency .....33.4 MHz
b) Sound IF Carrier Frequency .....33.16 MHz
Colour Sub-Carrier Frequency .....34.47 MHz (Nominal)

Power Input .....220/240 Volts AC 50 Hz
Power Consumption at Stand-by 3W
Power Consumption .....110 Wh
Speakers Size 13cmX6cm
Speaker Coil Impedance .....8 ohm
Sweep Deflection .....Magnetic
Field Scan .....100 Hz
Tuning Ranges .....48.25 MHz÷855.5 MHz CATV Special channels

Specifications are subject to change without prior notice .

WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.
To prevent electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.

IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be carried out by qualified service personnel only.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10 k ohm resistor in series with an insulated wire (such as test probe) between picture tube ground tag and high voltage lead. (AC line cord should be disconnected from AC outlet).

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute minimun. Since certain malfunctions ar servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed.

1. When repairing the circuit, be sure not to increase the high voltage to more than 30.0 kV (at beam 1000 μA) for the set.
2. To keep the set in a normal operation, be sure to make it function on 23.5kV ± 1.5kV (at beam1000 μA) in the case of the set. The set has been factory adjusted to the above mentioned high voltage. If there is a possibility that high voltage fluctuates as result of the repairs, never forget to check for such high voltage after the work.
3. Do not substitute a picture tube with unauthorized types or brands which may cause excess X-Ray radiation.

BEFORE RETURNING THE RECEIVER

In addition to the checks necessary as a result of a repair having been carried out, the following additional safety checks should also be made before returning the units to the user.

1. Inspect all lead insulation to make certain that leads are not pinched or that harware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustament and compartament covers or shields, insolation resistor-capacity networks, mechanical insulators, etc.

3- PIN PHASE

a) Receive Philips pattern signal.
b) When volume-up button is pressed, slide pincushion changes.
c) When volume-down button is pressed, slide pincushion changes.
d) Adjust the PIN PHASE to obtain condition as in (fig. 3).

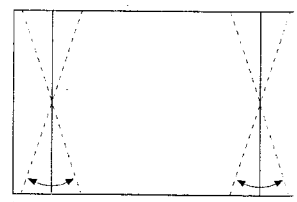


Fig. 3

4- PIN AMPLITUDE

a) Receive Philips pattern signal.
b) When volume-up button is pressed, slide pincushion changes from pincushion to barrel shape.
c) When volume-down button is pressed, slide pincushion changes from barrel to pincushion shape.
d) Adjust the PIN AMPLITUDE to obtain condition as in (fig. 4).

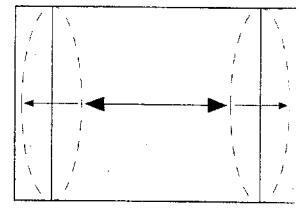


Fig. 4

5- UPPER CORNER CORRECTION

a) Receive Philips pattern signal.
b) When volume-up button is pressed, slide pincushion changes from pincushion to barrel shape.
c) When volume-down is pressed, slide pincushion changes from barrel to pincushion shape.
d) Adjust the UPPER CORNER CORRECTION to obtain condition as in (fig. 5).

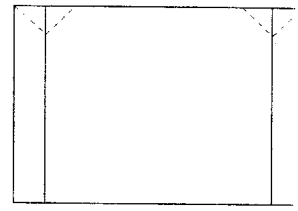


Fig. 5

6- LOWER CORNER CORRECTION

a) Receive Philips pattern signal.
b) When volume-up button is pressed, slide pincushion changes from pincushion to barrel shape.
c) When volume-down button is pressed, slide pincushion changes from barrel to pincushion shape.
d) Adjust the LOWER CORNER CORRECTION to obtain condition as in (fig. 6).

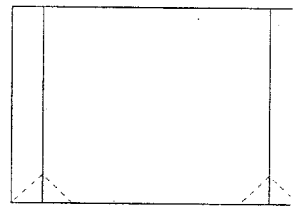


Fig. 6

7- VERTICAL LINEARITY

a) Receive Philips pattern signal.
b) When volume-up button is pressed, upper picture scanning decreases and lower picture scanning increase.
c) When volume-down button is pressed, upper picture scanning increases and lower picture scanning decreases.
d) Adjust the vertical symmetry to obtain symmetrical scanning between upper and lower picture (fig. 7).

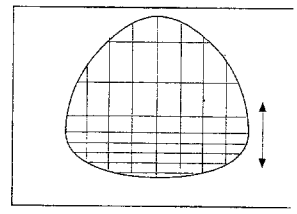


Fig. 7

8- VERTICAL ANGLE

a) Receive Philips pattern signal.
b) When volume-up button is pressed, vertical angle changes to the right.
c) When volume-down button is pressed, vertical angle changes to the left.
d) Adjust the VERTICAL ANGLE to obtain condition as in (fig. 8).

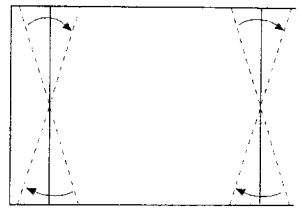


Fig. 8

9- VERTICAL BOW

a) Receive Philips pattern signal.
b) When volume-up button is pressed, vertical bow changes to the right.
c) When volume-down button is pressed, vertical bow changes to the left.
d) Adjust the VERTICAL BOW to obtain condition as in (fig. 9).

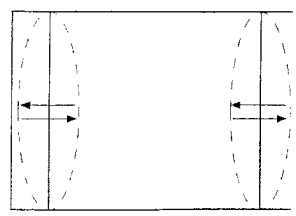


Fig. 9

Adjustment menu is as follows:

-SERVICE SOFTWARE
-HORIZONTAL SHIFT
-EAST WEST WIDTH
-PIN PHASE
-PIN AMP
-UPPER CORNER CORRECTION
-LOWER CORNER CORRECTION
-VERTICAL LINEARITY
-VERTICAL ANGLE
-VERTICAL BOW
-VERTICAL AMPLITUDE
-S CORRECTION
-VERTICAL SHIFT
-RED GAIN
-GREEN GAIN
-BLUE GAIN
-RED CUT OFF
-GREEN CUT OFF
-BLUE CUT OFF
-ALTER NVM PAG
-TELETEXT MIX MODE CONTRAST
-TELETEXT CONTRAST
-OSD CONTRAST
-DVCO ADJUSTMENT
-LUMA CHROMA DELAY
-OPC VALUE
-AUTOINSTALLATION ON/OF

To exit service mode, press main switch to off.

Adjustment Note:

The procedure for making adjustments to horizontal corrections is as follows:
-Adjust HORIZONTAL SHIFT
-Adjust E-W WIDTH
-Adjust PIN PHASE
-Adjust PIN AMPLITUDE
-Adjust UPPER CORNER CORRECTION
-Adjust LOWER CORNER CORRECTION

The procedure for making adjustments to vertical corrections is as follows:
-Adjust VERTICAL AMPLITUDE
-Adjust S-CORRECTION
-Adjust VERTICAL SHIFT
-Adjust VERTICAL LINEARITY
-Adjust VERTICAL ANGLE
-Adjust VERTICAL BOW

1- HORIZONTAL SHIFT

a) Receive Philips pattern signal.
b) When volume-up button is pressed, picture moves to the left.
c) When volume-down button in pressed, picture moves to the right.
d) Adjust the horizontal location to obtain picture centering (fig. 1).

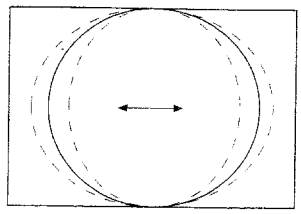


Fig. 1

2- E-W WIDTH

a) Receive Philips pattern signal.
b) When volume-up button is pressed, horizontal scanning increases.
c) When volume-down button is pressed, horizontal scanning decreases.
d) Adjust the horizontal amplitude to obtain 9% overscan (fig. 2).

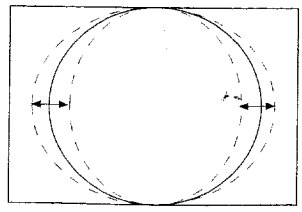


Fig. 2

ACCESS TO NVM

Press CH∧ to move in the following secuence:
ALTER NVM PAG → ALTER NVM POS → ALTER NVM VAL
to alter preseting adjustments, press up/down-volume buttons on ALTER NVM VAL.
⚠ CAUTION: Do not change NVM VALUE to avoid risk of serious damages to TV set.

CONTRAST ADJUSTMENT

Up/Down-volume buttons are used to adjust the contrast of the following items:
-TELETEXT MIX MODE CONTRAST
-TELETEXT CONTRAST
-OSD CONTRAST

DVCO ADJUSTMENT

a) Receive Philips pattern signal.
b) When Stand-by button is pressed (Remote Control Unit), start automatically the adjustment.

LUMA CHROMA DELAY

a) Receive Philips pattern signal.
b) When volume-up button is pressed, luma phase delays.
c) When volume-down button is pressed, chroma phase delays.
d) Adjust the Chroma-Luma delay.

OPC VALUE

Shows reading of detected illuminated value by O.P.C. (Optical Picture Control) to check function.

AUTO INSTALLATION OFF/ON

When ON is selected, the TV will perform the autoinstallation secuence as soon as service mode is removed.

PROTECTIONS CANCEL

a) Connect Test Pattern signal to antenna terminal.
b) Press main switch to OFF.
c) Press volume-down and channel-up buttons and main switch to ON simultaneously.
d) "Service software Vxx.xx" appears on screen.
c) Press main switch to OFF.

10- VERTICAL AMPLITUDE

a) Receive Philips pattern signal.
b) When volume-up button is pressed, vertical size of picture increases.
c) When volume-down button is pressed, vertical size of picture decreases.
d) Adjust the vertical size to obtain overscan (fig. 10).

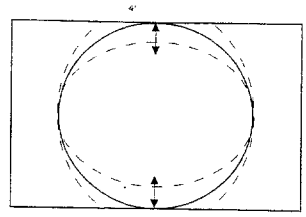


Fig. 10

11- S-CORRECTION

a) Receive Philips pattern signal.
b) When volume-up button is pressed, upper and lower scanning decreases, and center scanning increases.
c) When volume-down button is pressed, upper and lower scanning increases, and center scanning decreases.
d) Adjust the S-correction to obtain a balance between upper, lower and center (fig. 11).

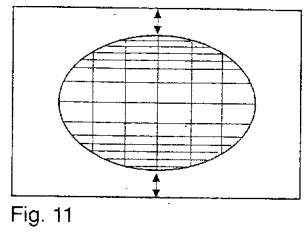


Fig. 11

12- VERTICAL SHIFT

a) Receive Philips pattern signal.
b) When volume-up button is pressed, picture moves up.
c) When volume-down button is pressed, picture moves down.
d) Adjust the horizontal location to obtain picture centering (fig. 12)

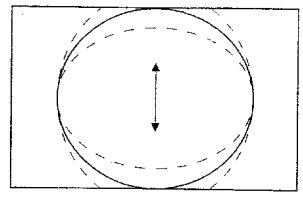


Fig. 12

COLOUR ADJUSTMENT

The following adjustments are only required when the Picture Tube is changed.

1. RED CUT OFF / GREEN CUT OFF / BLUE CUT OFF

1.1 Adjust G2.
1.2 Tune a white card.
1.3 Adjust colour to minimum.
1.4 Position colourimeter in the center of screen.
1.5 Adjust brightness and contrast to obtain a luminance of ≈ 20 NITS.
1.6 Operate in Service Mode and select location RED CUT OFF / GREEN CUT OFF / BLUE CUT OFF, to obtain colour coordinates:

$$X = 0.290 \pm 0.015$$
$$Y = 0.284 \pm 0.015$$

To increase press volume-up button and to decrease press volume-down button

RED CUT OFF	alter "X" coordinate
GREEN CUT OFF	alter "Y" coordinate
BLUE CUT OFF	alter "X" and "Y" coordinate

1.7 The changes introduced can be memorized by pressing button ⏻ on TV set.

2. RED GAIN / GREEN GAIN / BLUE GAIN

2.1 Using brightness and contrast buttons, select a luminance of ≈ 110 NITS.
2.2 Operate again in Service Mode and select location RED GAIN / GREEN GAIN BLUE GAIN, to obtain colour coordinates:

$$X = 0.290 \pm 0.015$$
$$Y = 0.284 \pm 0.015$$

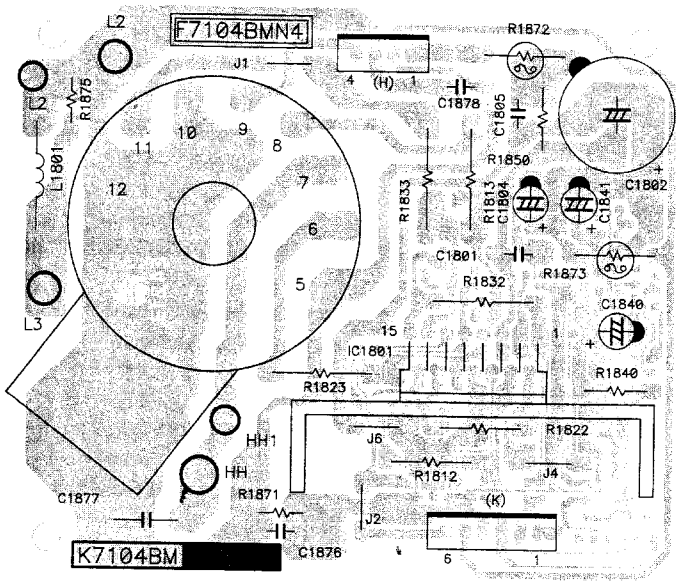
To increase press volume-up button and to decrease press volume-down button

RED GAIN	alter "X" coordinate
GREEN GAIN	alter "Y" coordinate
BLUE GAIN	alter "X" and "Y" coordinate

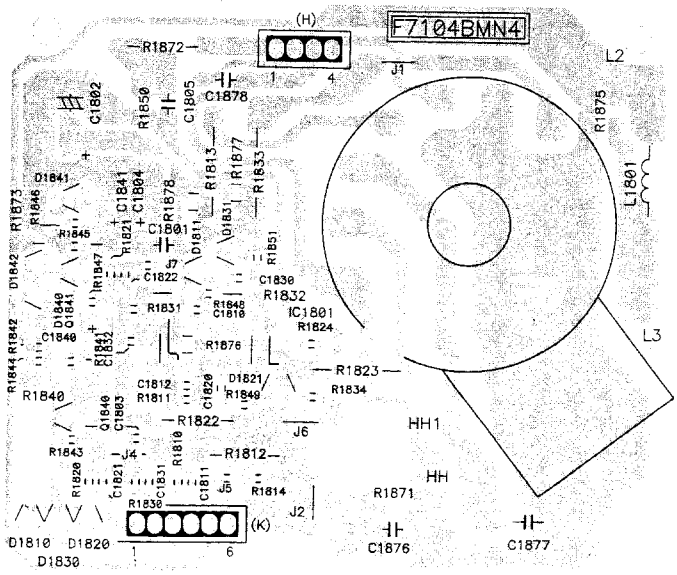
2.3 The changes introduced can be memorized by pressing button ⏻ on TV set.

2.4 Exit Service Mode and check colour coordinates "X" and "Y" at 20 and 110 NITS. It may be necessary to repeat procedure 1 and 2 of COLOUR ADJUSTMENT.

PRINTED WIRING BOARDS

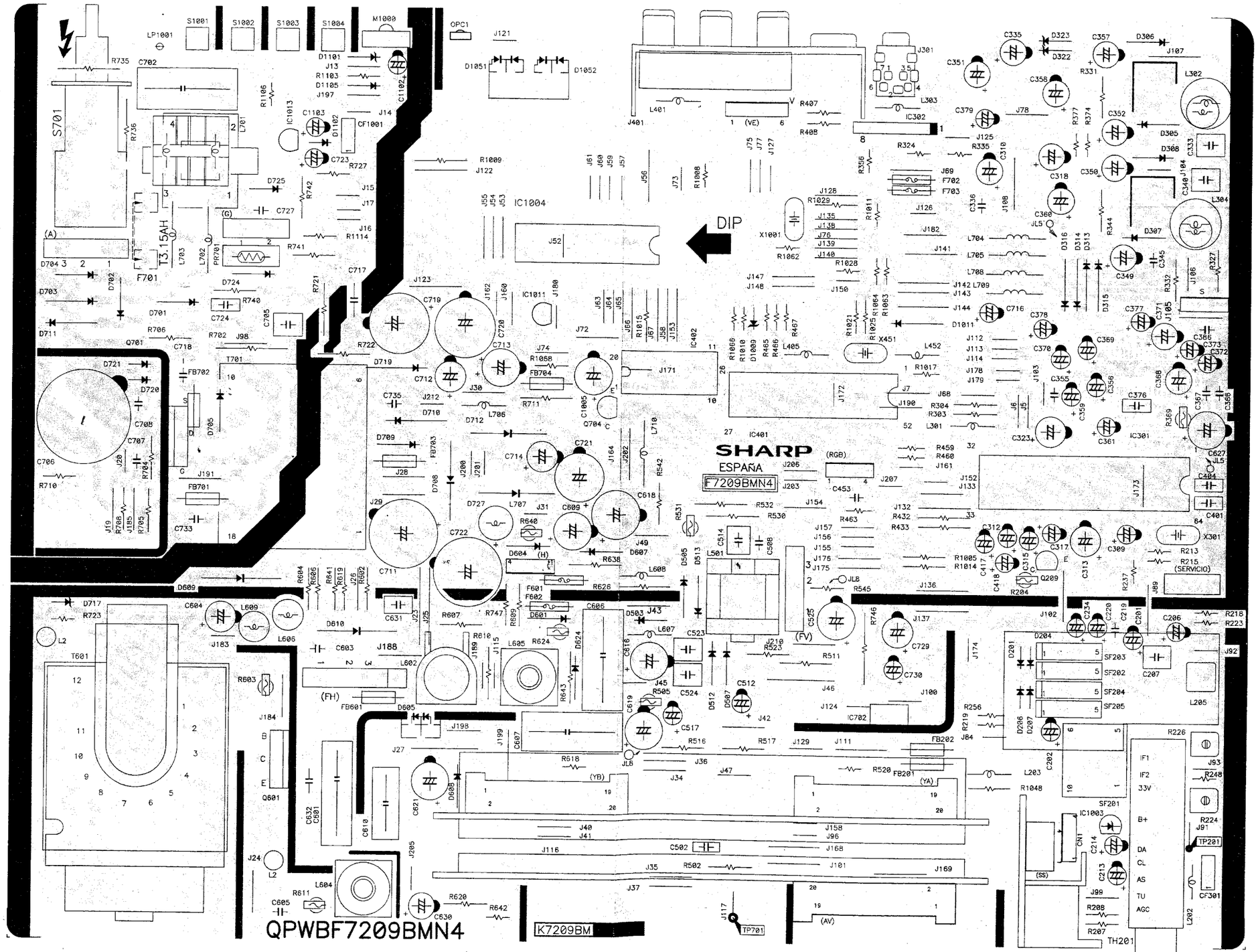


1/2 PWB-B



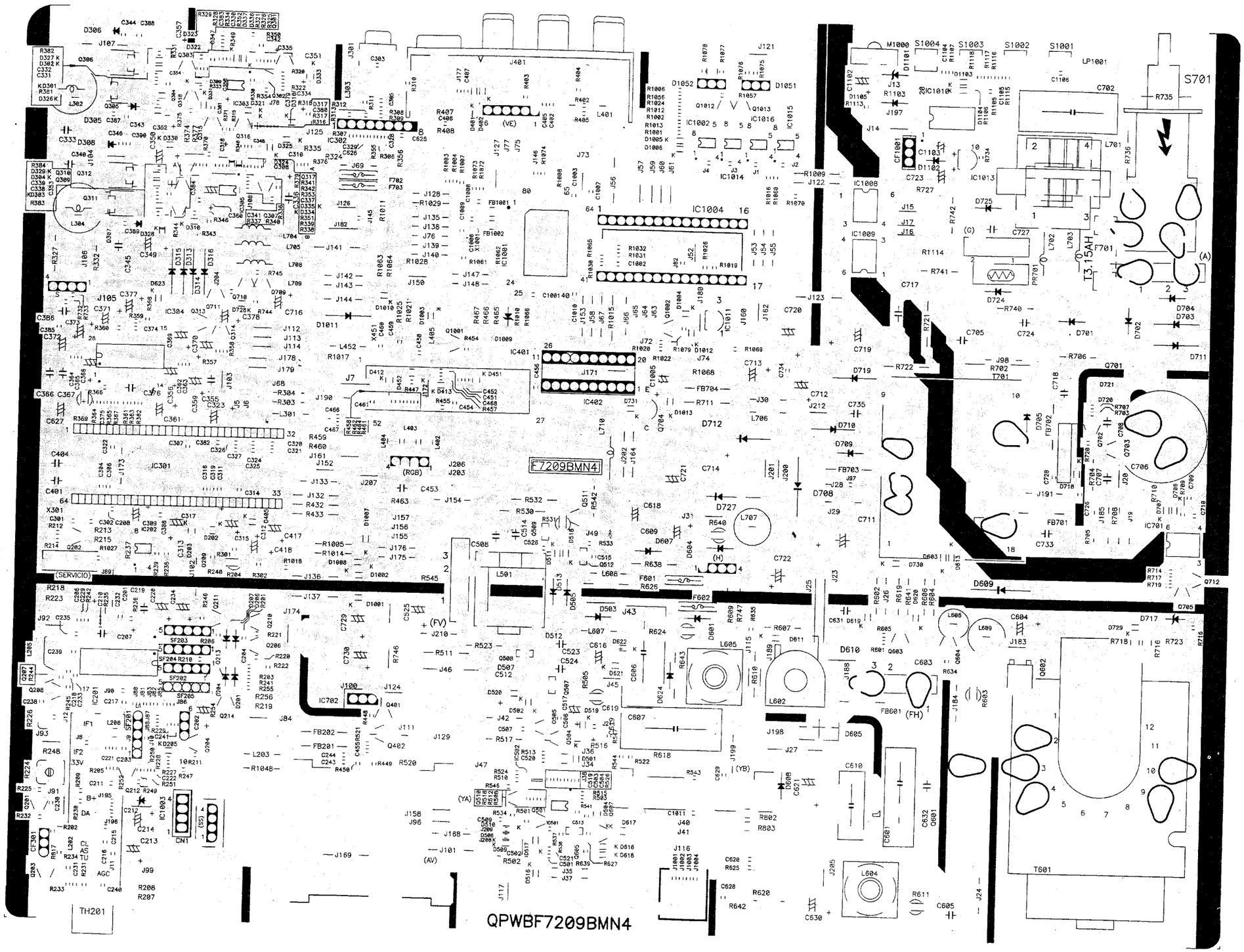
1/2 PWB-B

PRINTED WIRING BOARDS

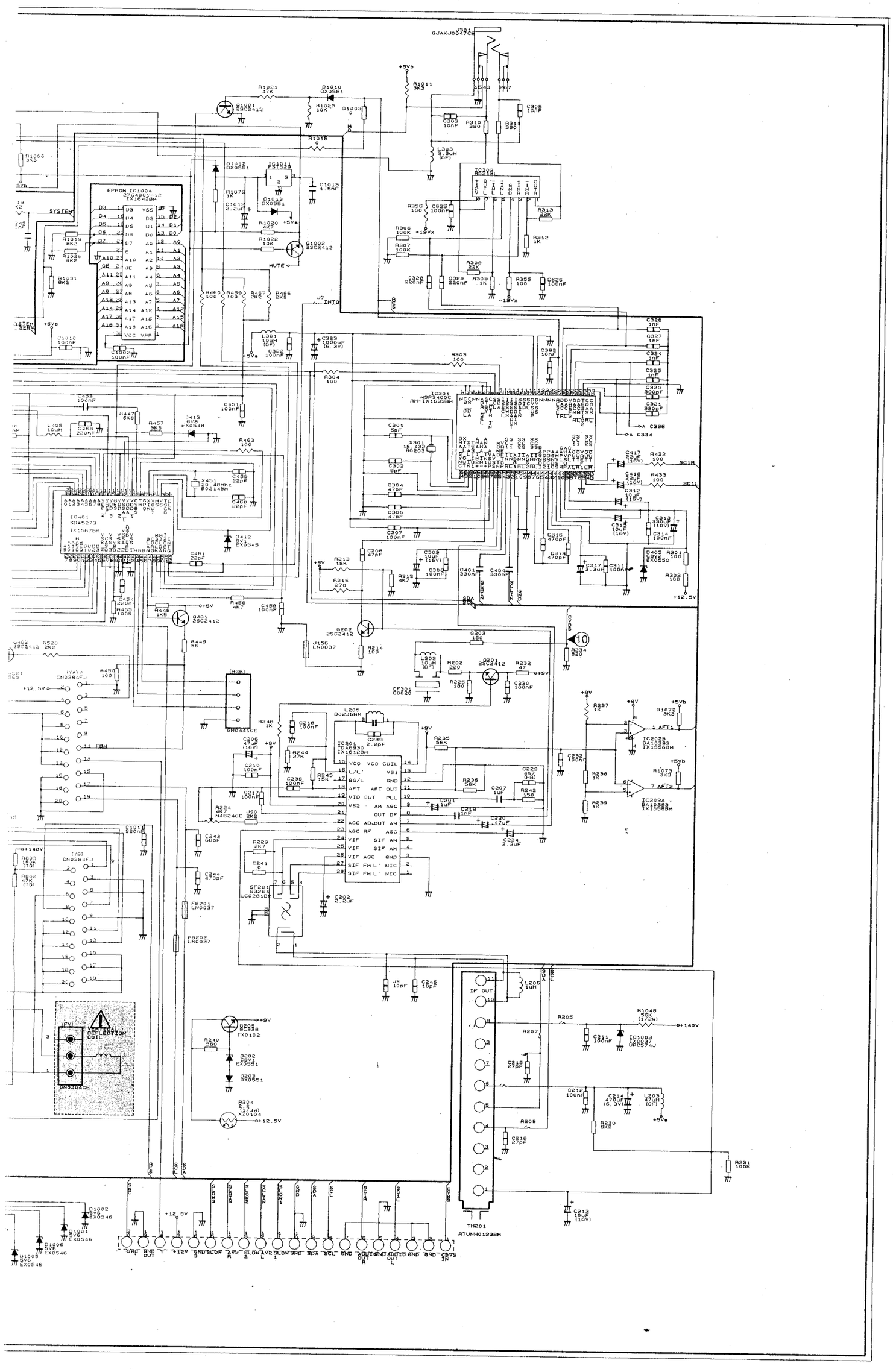


1/2 PWB-A

PRINTED WIRING BOARDS



1/2 PWB-A



1
616 Vp-p 63.75KHz

2
5.6 Vp-p 31.25KHz

3
1.29 KV 31.25KHz

4
2Vp-p 100Hz

5
67Vp-p 100Hz

6
2Vp-p 100Hz

7
208Vp-p 100Hz

8
35Vp-p 160KHz

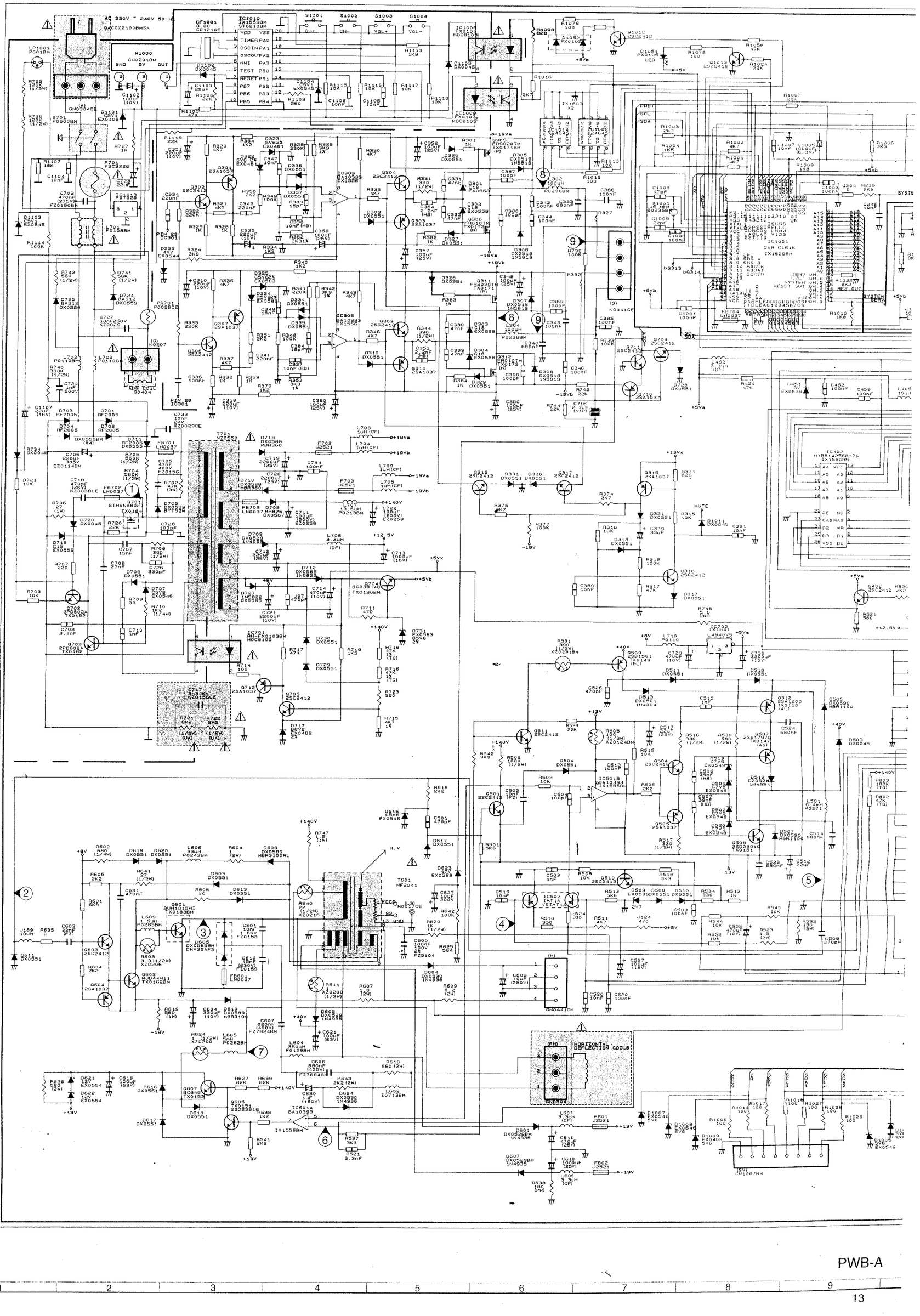
9
19Vp-p 400Hz (Audio Out)

10
1.1Vp-p 50Hz

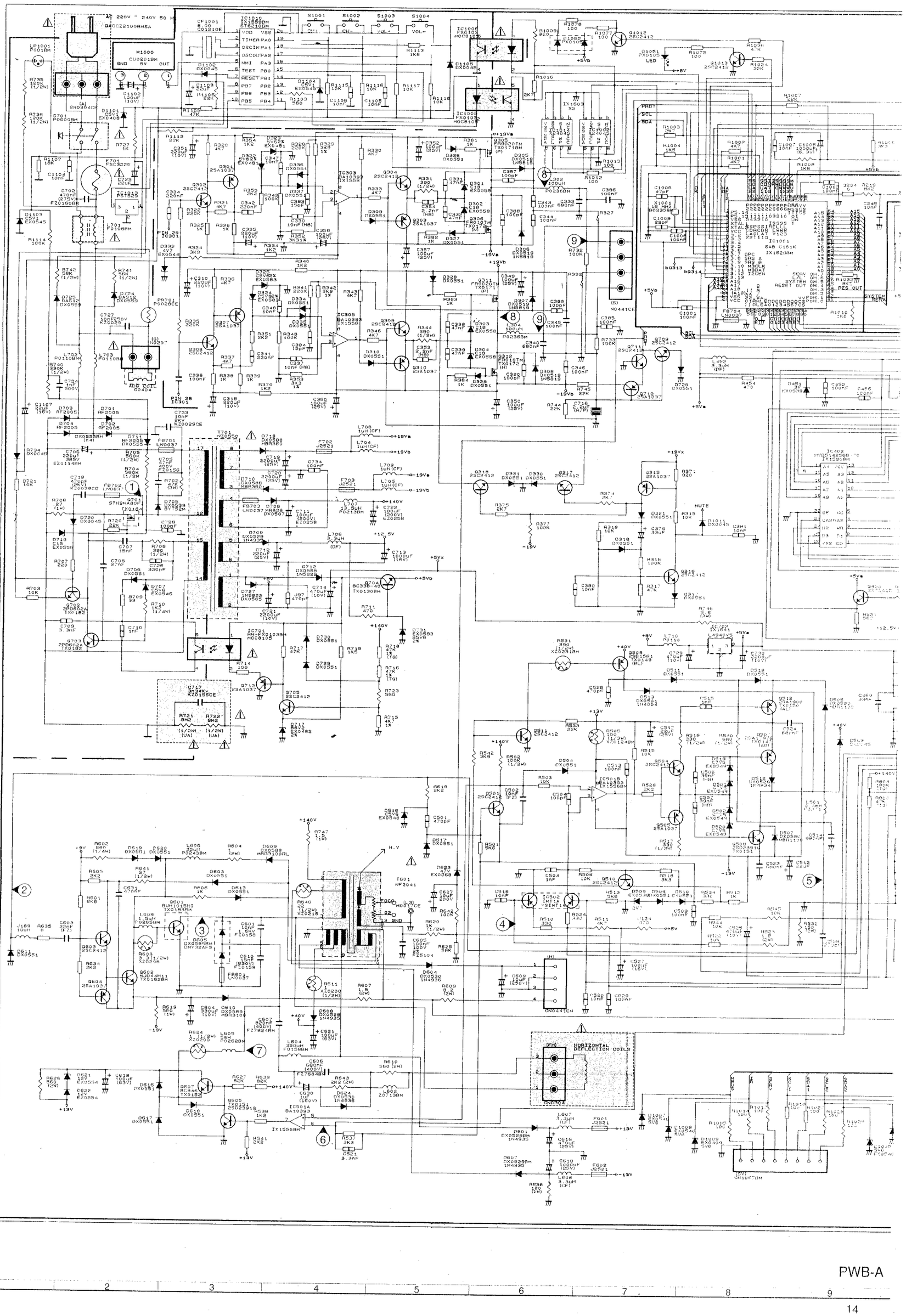
3-A

10 11 12 13 14 15 16 17 18

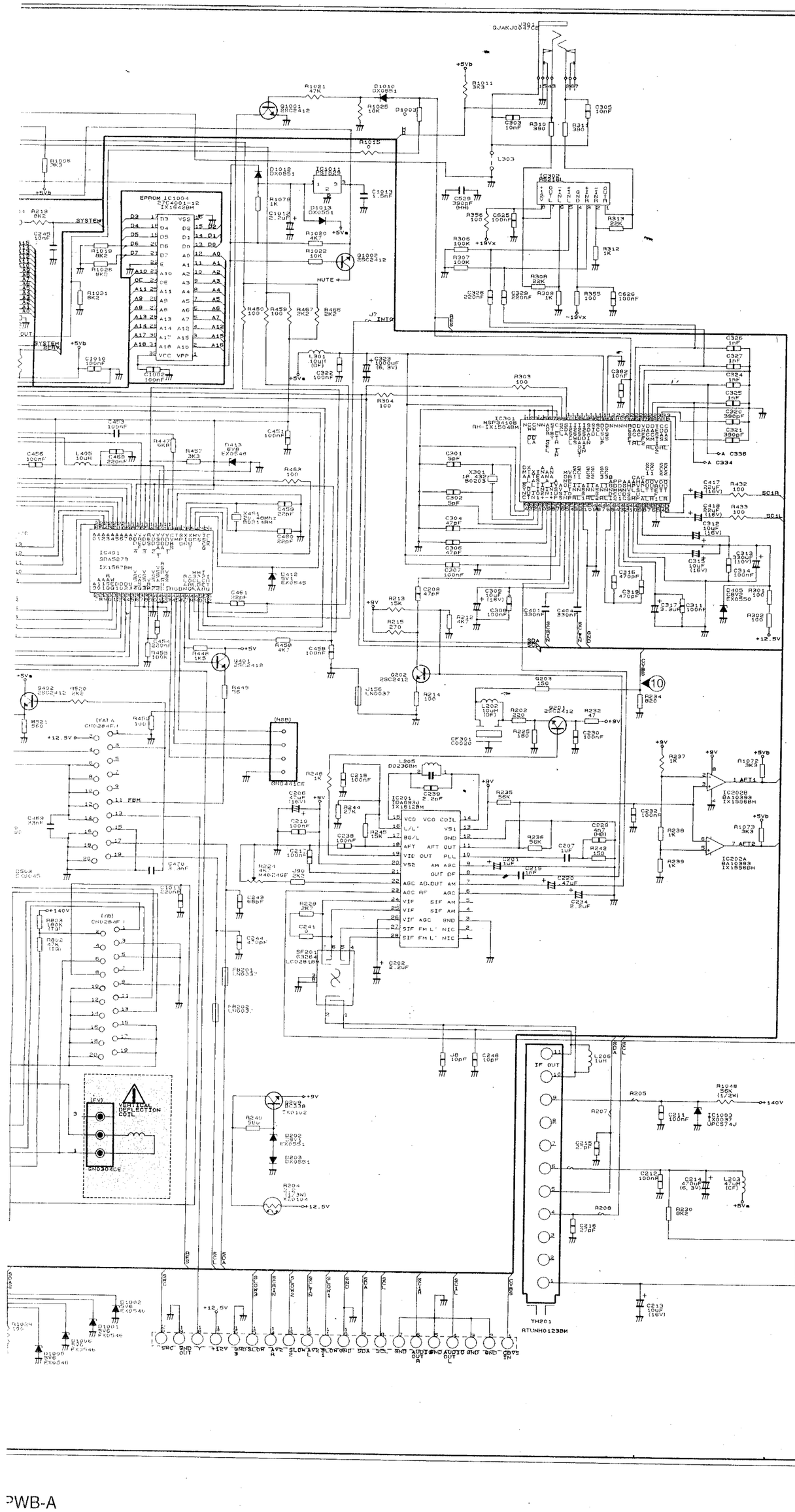
SCHEMATIC DIAGRAM 70DS-15S / C-7015S



SCHEMATIC DIAGRAM 70DS-15SN MOTHER UNIT



PWB-A



1
616 Vp-p 63.75KHz

2
5.6 Vp-p 31.25KHz

3
1.29 KV 31.25KHz

4
2Vp-p 100Hz

5
67Vp-p 100Hz

6
2Vp-p 100Hz

7
208Vp-p 100Hz

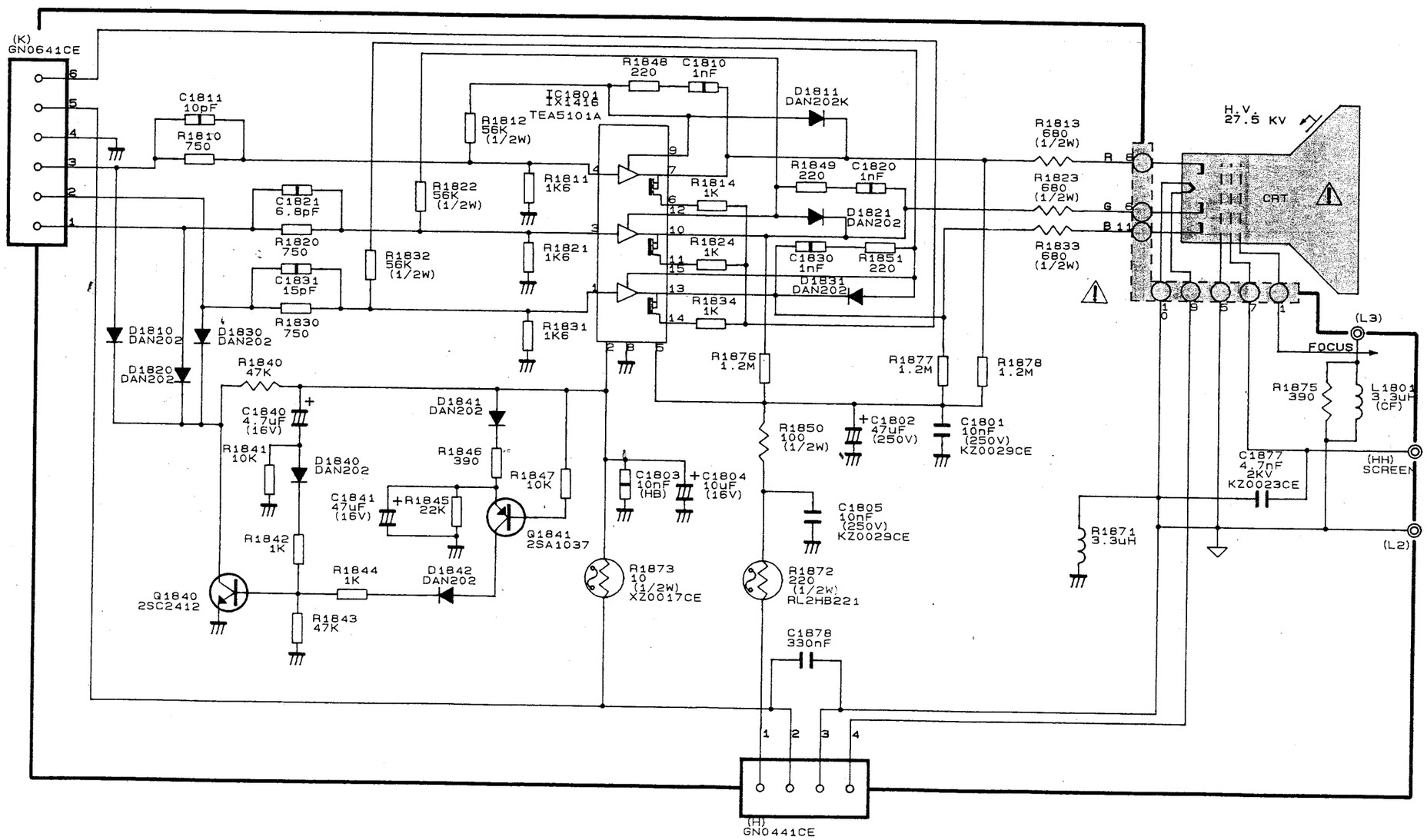
8
35Vp-p 160KHz

9
19Vp-p 400Hz (Audio Out)

10
1.1Vp-p 50Hz

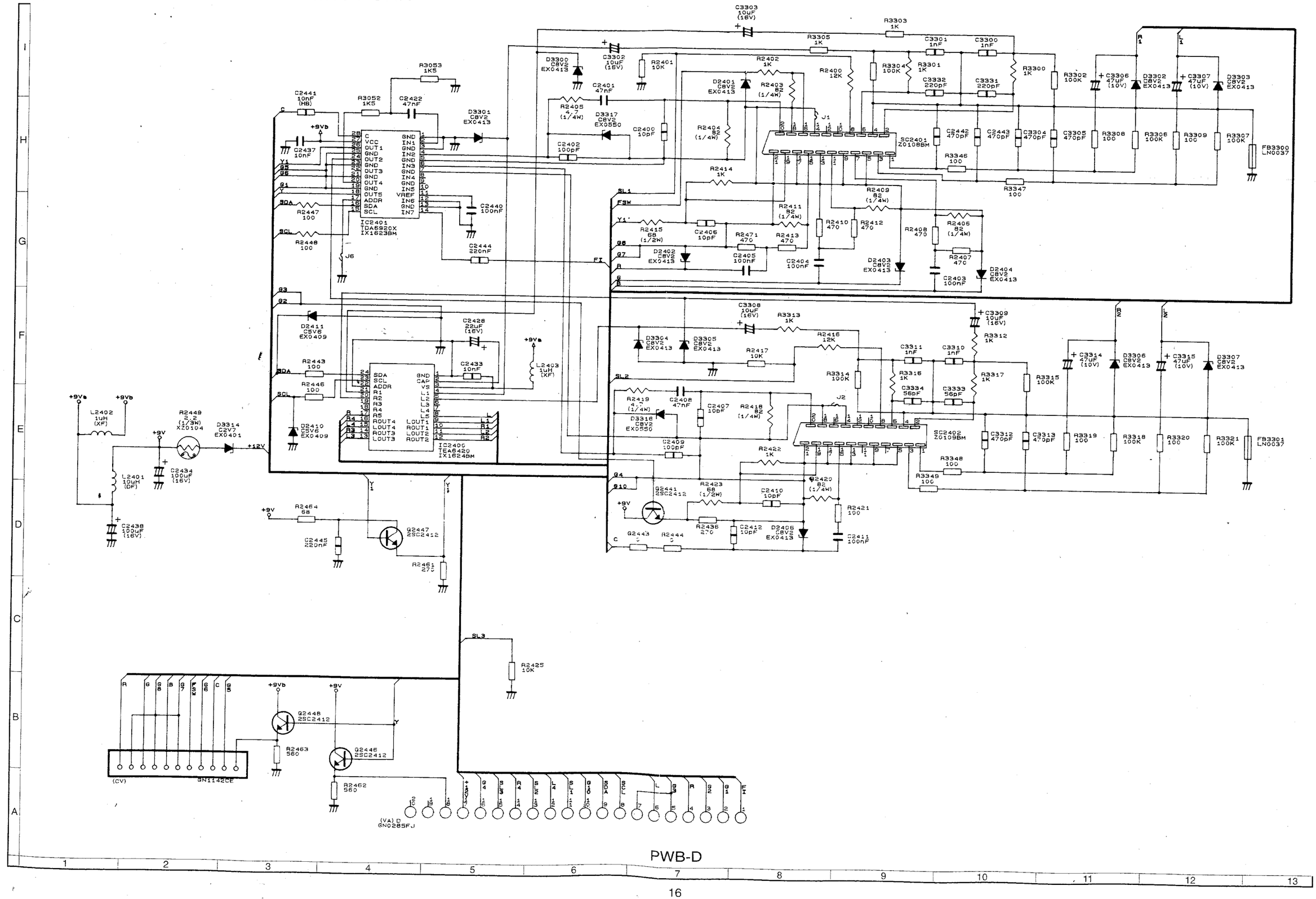
PWB-A

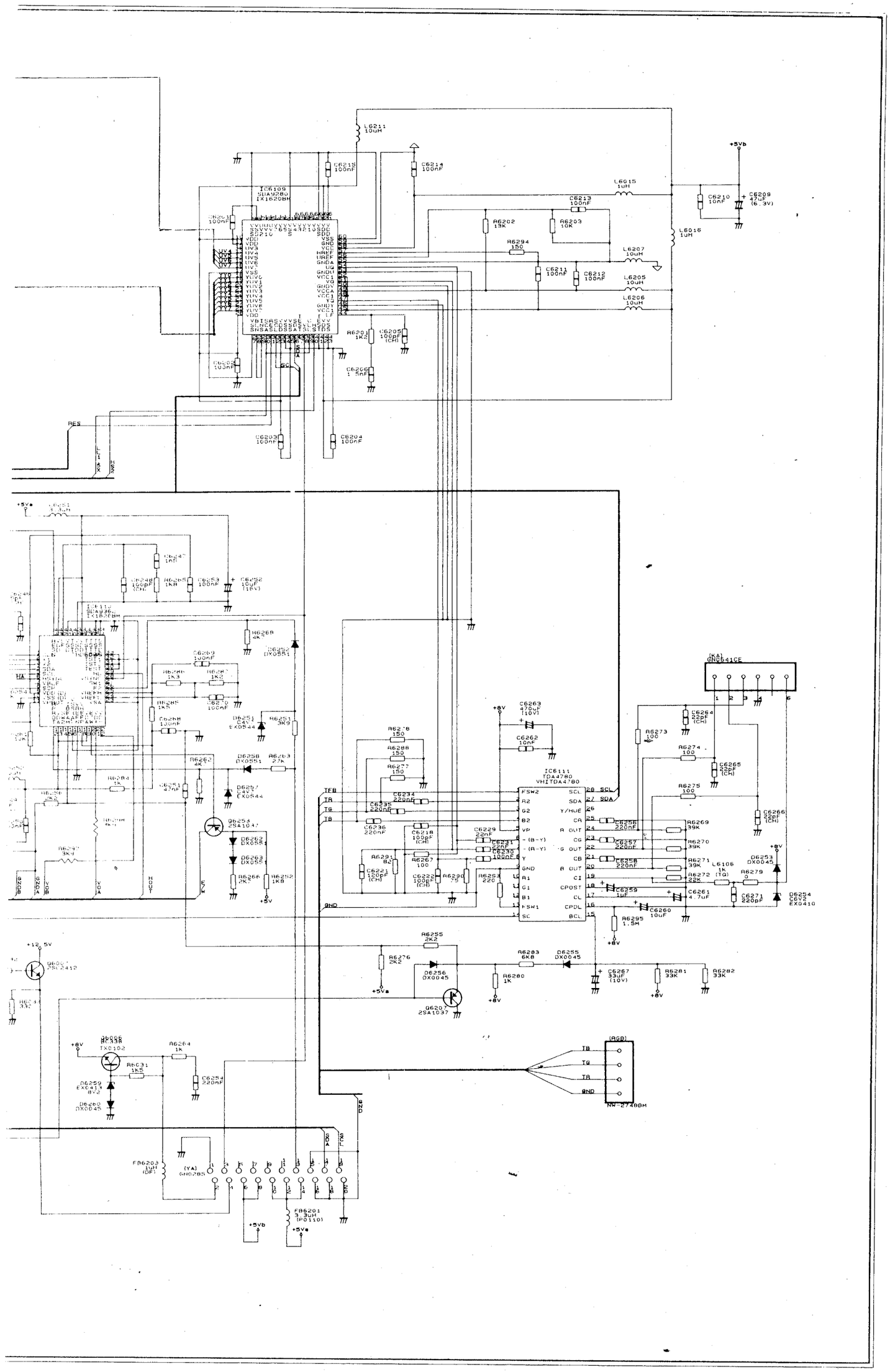
SCHEMATIC DIAGRAM SOCKET UNIT



PWB-B

SCHEMATIC DIAGRAM A/V UNIT





① 616 Vp-p 63.75KHz

② 5.6 Vp-p 31.25KHz

③ 1.29 KV 31.25KHz

④ 2Vp-p 100Hz

⑤ 67Vp-p 100Hz

⑥ 2Vp-p 100Hz

⑦ 208Vp-p 100Hz

⑧ 35Vp-p 160KHz

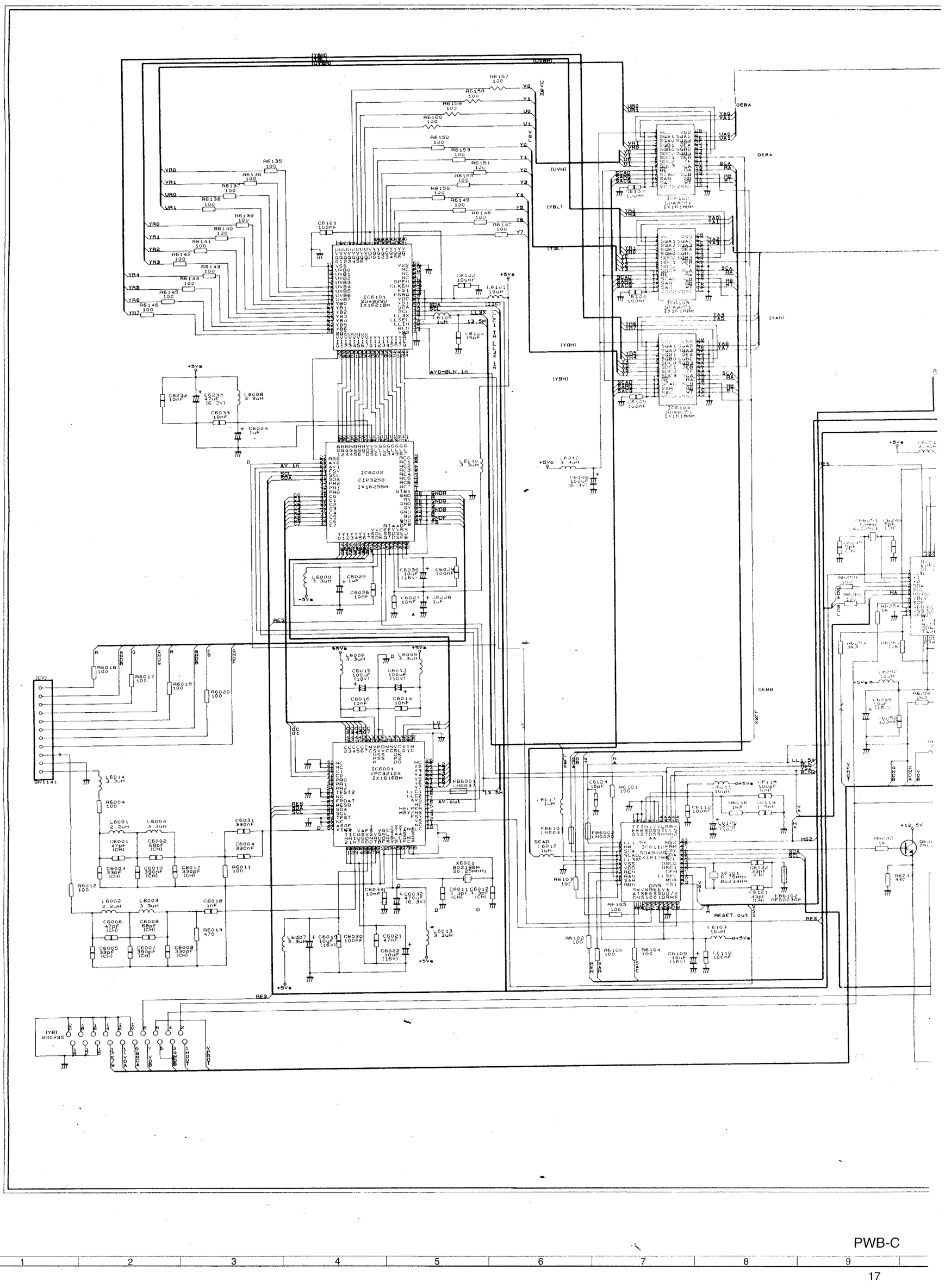
⑨ 19Vp-p 400Hz (Audio Out)

⑩ 1.1Vp-p 50Hz

-C

10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18

SCHEMATIC DIAGRAM 100 Hz UNIT



PWB-C

PARTS LIST

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual. Electrical components having such features are identified by ⚠ in the Replacement Parts list.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted. Replacement parts not shown in this service manual may create shock fire, or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

CODE EX: EUROPEAN MARKET
CODE SP: SPANISH MARKET
★ MARK: SPARE PARTS DELIVERY SECTION

REF. NO.	PARTS NO.	★	DESCRIPTION	CODE EX	CODE SP
PICTURE TUBE					
⚠	VB66EAK0714*N	S	C.R.T. 28"	CU	CT
⚠	CCILG0404BMV0	S	Degaussing Coil 28"	AV	AM
PRINTED WIRING BOARDS ASSEMBLES (Not replacement item)					
PWB-A	DUNTK7209CJV3	S	Mother Unit 70DS15S/C7015S	—	—
PWB-A	DUNTK7209CJV4	S	Mother Unit 70DS15SN	—	—
PWB-B	DUNTK7104BMW8	S	Socket Unit	—	—
PWB-C	DUNTK7220BMV0	S	100Hz Unit 70DS15S/C7015S	—	—
PWB-C	DUNTK7220BMV1	S	100Hz Unit 70DS15SN	—	—
PWB-D	DUNTK7212BMV3	S	A/V Unit 70DS15S/C7015S	—	—
PWB-D	DUNTK7212BMV4	S	A/V Unit 70DS15SN	—	—
PWB-A	**MOTHER UNIT**				
TUNER					
NOTE: The parts shown here are supplied as an assembly but not separately.					
TH 0201	RTUNH0123BMZZ	S	Tuner	BA	AX
INTEGRATED CIRCUITS					
IC 0201	RH-IX1612BMZZ	S	TDA6930X	AS	AP
IC 0202	RH-IX1556BMZZ	S	BA10393 S0P8	AD	AC
IC 0301	RH-IX1633BMZZ	S	MSP3400 70DS15S/C7015S	BB	AV
IC 0301	RH-IX1504BMZZ	S	MSP3410 70DS15SN	BG	AZ
IC 0302	VHIM5218L//-1	S	M5218L	AF	AB
IC 0303	RH-IX1556BMZZ	S	BA10393 S0P8	AD	AC
IC 0305	RH-IX1556BMZZ	S	BA10393 S0P8	AD	AC
IC 0401	RH-IX1567BMZZ	S	SDA5273 SDIP52	BG	AZ
IC 0402	RH-IX1580BMZZ	S	DRAM	AY	AW
IC 0501	RH-IX1556BMZZ	S	BA10393 S0P8	AD	AC
IC 0502	VSIMT1A/A//-1	S	IMT1A	AZ	AS
⚠IC 0701	RH-FX0103BMZZ	S	MOC8105SR2V	AD	AC
IC 0702	RH-IX1641BMZZ	S	L4940V5	AK	AE
IC 1001	RH-IX1629BMZZ	S	SAB-C161K-L16Q	AY	AV
IC 1002	RH-IX1603BMZZ	S	NVM	AV	AS
IC 1003	RH-IX0037CEZZ	S	UPC574J 33V	AD	AF
IC 1004	CH-IX1642CJS2	S	EPROM 70DS15S/C7015S	AZ	AT
IC 1004	CH-IX1642CJP0	S	EPROM 70DS15SN	AZ	AS
⚠IC 1008	RH-FX0103BMZZ	S	MOC8105SR2V	AD	AC
⚠IC 1009	RH-FX0103BMZZ	S	MOC8105SR2V	AD	AC
IC 1010	RH-IX1559BMZZ	S	ST6210BM	AU	AR
IC 1011	VHIPST529C2-1	S	PST529C	AD	AD
IC 1013	VHIPST529C2-1	S	PST529C	AD	AD
IC 1014	RH-IX1603BMZZ	S	NVM	AV	AS
TRANSISTORS					
Q 0201	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0202	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0209	RH-TX0102BMZZ	S	BC338	AB	AA
Q 0301	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0302	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0303	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0304	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0305	RH-TX0171BMZZ	J	IRFR9020TM	AF	AE
Q 0306	RH-TX0172BMZZ	J	IRFR010TM	AE	AD
Q 0307	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0308	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0309	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0310	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0311	RH-TX0171BMZZ	J	IRFR9020TM	AA	AE
Q 0312	RH-TX0172BMZZ	J	IRFR010TM	AE	AD
Q 0315	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0316	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0317	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0318	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0401	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0402	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0501	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0504	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0505	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0507	RH-TX0147BMZZ	S	2SA1797T100/Q	AD	AD
Q 0508	RH-TX0151BMZZ	S	2SD2391Q	AD	AC
Q 0509	RH-TX0149BMZZ	S	2SB1561	AD	AC
Q 0510	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0511	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0512	RH-TX0150BMZZ	S	2SA1900T100/Q	AC	AB
Q 0601	RH-TX0183BMZZ	S	BUH1015HI	AR	AK
Q 0602	RH-TX0162BMZZ	S	MJD44H11	AF	AD
Q 0603	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0604	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0605	RH-TX0151BMZZ	S	2SD2391Q	AD	AC
Q 0607	RH-TX0152BMZZ	S	BC846BLT1	AA	AA
Q 0701	RH-TX0184BMZZ	S	STH9NA80FI	AW	AP
Q 0702	RH-TX0182BMZZ	S	2PD602AR	AB	AA
Q 0703	RH-TX0182BMZZ	S	2PD602AR	AB	AA
Q 0704	RH-TX0130BMZZ	S	BC338-40	AB	AA
Q 0705	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0709	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0710	VS2SA1037KQ-1	S	BC807	AA	AA
Q 0711	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 0712	VS2SA1037KQ-1	S	BC807	AA	AA
Q 1001	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 1002	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 1012	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 1013	VS2SC2412KQ-1	S	2SC2412	AA	AA
DIODES					
D 0202	RH-EX0551BMZZ	S	Zener TZMC9V1	AA	AA
D 0203	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0301	RH-EX0558BMZZ	S	Zener TZMC18	AA	AA
D 0302	RH-EX0558BMZZ	S	Zener TZMC18	AA	AA
D 0303	RH-EX0558BMZZ	S	Zener TZMC18	AA	AA
D 0304	RH-EX0558BMZZ	S	Zener TZMC18	AA	AA
D 0305	RH-DX0519BMZZ	S	1N5819	AD	AB
D 0306	RH-DX0519BMZZ	S	1N5819	AD	AB
D 0307	RH-DX0519BMZZ	S	1N5819	AD	AB
D 0308	RH-DX0519BMZZ	S	1N5819	AD	AB
D 0309	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0310	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0317	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0318	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0321	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0322	RH-EX0481BMZZ	S	Zener BZX79 B5V6	AB	AA

CAPACITORS

REF. NO.	PARTS NO.	★	DESCRIPTION	CODE EX	CODE SP
C 0207	RC-FZ9105BMNJ	J	1 63V Mylar	AD	AB
C 0214	VCEAGA0JW477M	S	470 6.3V Electrolytic	AB	AA
C 0219	RC-FZ9102BMNJ	J	1000p 63V Mylar	AB	AA
C 0310	VCEAGA1AW227M	S	220 10V Electrolytic	AB	AA
C 0313	VCEAGA1AW337M	S	330 10V Electrolytic	AB	AA
C 0318	VCEAGA1AW227M	S	220 10V Electrolytic	AB	AA
C 0323	VCEAGA0JW108M	S	1000 6.3V Electrolytic	AB	AA
C 0333	RC-FZ9684BMNJ	J	0.68 63V Mylar	AD	AB
C 0335	VCEAGA1AW227M	S	220 10V Electrolytic	AB	AA
C 0336	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 0340	RC-FZ9684BMNJ	J	0.68 63V Mylar	AD	AB
C 0345	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 0349	VCEAGA1EW107M	S	100 25V Electrolytic	AB	AA
C 0350	VCEAGA1EW107M	S	100 25V Electrolytic	AB	AA
C 0351	VCEAGA1AW227M	S	220 10V Electrolytic	AB	AA
C 0352	VCEAGA1EW107M	S	100 25V Electrolytic	AB	AA
C 0357	VCEAGA1EW107M	S	100 25V Electrolytic	AB	AA
C 0358	VCEAGA1EW107M	S	100 25V Electrolytic	AB	AA
C 0360	VCEAGA1EW107M	S	100 25V Electrolytic	AB	AA
C 0386	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 0401	RC-FZ9334BMNJ	J	0.33 63V Mylar	AC	AA
C 0404	RC-FZ9334BMNJ	J	0.33 63V Mylar	AC	AA
C 0453	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 0502	RC-FZ9103BMNJ	J	0.01 63V Mylar	AB	AA
C 0508	VCCSPA1HL271J	S	270p 50V Ceramic	AA	AA
C 0514	RC-FZ9684BMNJ	J	0.68 63V Mylar	AD	AB
C 0523	RC-FZ9684BMNJ	J	0.68 63V Mylar	AD	AB
C 0524	RC-FZ9684BMNJ	J	0.68 63V Mylar	AD	AB
C 0525	VCEAGA1AW477M	S	470 10V Electrolytic	AB	AA
C 0527	VCEAGA1CW107M	S	100 16V Electrolytic	AB	AA
C 0601	RC-FZ0158BMZZ	S	0.01 1KV Mylar	AF	AD
C 0603	RC-FZ9223BMNJ	J	0.022 63V Mylar	AB	AA
C 0604	VCEAGA1AW337M	S	330 10V Electrolytic	AB	AA
C 0605	RC-FZ5104BMNG	S	0.1 100V Mylar	AD	AB
C 0606	RC-FZ7684BMNJ	S	0.68 400V Mylar	AH	AE
C 0607	RC-FZ7824BMNJ	J	0.82 400V Mylar	AK	AG
C 0609	VCEAGA2EW106M	S	10 250V Electrolytic	AD	AC
C 0610	RC-FZ0159BMZZ	S	0.015 630V Mylar	AF	AC
C 0616	VCEAGA1EW477M	S	470 25V Electrolytic	AD	AC
C 0618	VCEAGA1EW108M	S	1000 25V Electrolytic	AD	AD
C 0619	VCEAGA1JW107M	S	100 63V Electrolytic	AB	AA
C 0621	VCEAGA1JW107M	S	100 63V Electrolytic	AB	AA
C 0627	VCEAGA2DW106M	S	10 200V Electrolytic	AD	AB
C 0630	VCEAGA2CW105M	S	1 160V Electrolytic	AB	AA
C 0631	RC-FZ9474BMNJ	J	0.47 63V Mylar	AD	AB
C 0702	RC-FZ0160BMZZ	S	0.47 275V Mylar	AG	AD
C 0705	RC-FZ0156BMZZ	S	0.022 630V Mylar	AE	AD
C 0706	RC-EZ0114BMZZ	S	220 385V Electrolytic	AS	AP
C 0707	RC-FZ9153BMNJ	J	0.015 63V Mylar	AB	AA
C 0708	RC-FZ9273BMNJ	J	0.027 63V Mylar	AB	AA
C 0711	RC-EZ0258CEZZ	S	100 200V Electrolytic	AH	AH
C 0712	VCEAGA1EW227M	S	220 25V Electrolytic	AA	AA
C 0713	VCEAGA1CW108M	S	1000 16V Electrolytic	AE	AD
C 0714	VCEAGA1AW477M	S	470 10V Electrolytic	AB	AA
C 0716	VCE9GA1HW225M	S	2.2 50V Electrolytic (N/P)	AB	AA
⚠ C 0717	RC-KZ0156CEZZ	S	3300p 4KV Ceramic	AD	AB
C 0718	RC-KZ0038CEZZ	S	470p 2KV Ceramic	AB	AB
C 0719	VCEAGA1EW228M	S	2200 25V Electrolytic	AF	AD
C 0721	VCEAGA1AW228M	S	2200 10V Electrolytic	AF	AC
C 0722	RC-EZ0258CEZZ	S	100 200V Electrolytic	AH	AH
C 0724	VCKYPA2HB102K	S	1000p 500V Ceramic	AA	AA
C 0727	RC-KZ0029CEZZ	S	0.01 250V Ceramic	AC	AC
C 0729	VCEAGA1AW477M	S	470 10V Electrolytic	AB	AA
C 0730	VCEAGA1AW228M	S	2200 10V Electrolytic	AF	AC
C 0733	RC-KZ0029CEZZ	S	0.01 250V Ceramic	AC	AC
C 1005	VCEAGA0JW108M	S	1000 6.3V Electrolytic	AB	AA
C 1013	RC-FZ9152BMNJ	S	1500p 63V Mylar	AB	AA
C 1102	VCEAGA1AW107M	S	100 10V Electrolytic	AA	AA

RESISTORS

REF. NO.	PARTS NO.	★	DESCRIPTION	CODE EX	CODE SP
R 0204	RR-XZ0104BMZZ	S	2.2 1/3W Fuse Resistor	AB	A
R 0224	RVR-M4624GEZZ	S	4.7K	AB	A
R 0505	RR-XZ0124BMZZ	S	100 1/3W Fuse Resistor	AA	A
R 0523	VRN-VV3DB1R5J	S	1.5 2W Metal Film	AB	A
R 0531	RR-XZ0231BMZZ	S	390 1/2W Fuse Resistor	AB	A
R 0532	VRS-VV3DB151J	S	150 2W Metal Oxide	AA	A
R 0603	RR-XZ0206BMZZ	S	3.3 1/2W Fuse Resistor	AB	A
R 0604	VRN-VV3DB1R0J	S	1 2W Metal Film	AA	A
R 0607	VRN-VV3DB1R8J	S	1.8 2W Metal Film	AA	A
R 0609	VRS-VV3DB8R2J	S	8.2 2W Metal Oxide	AA	A
R 0610	VRS-VV3DB561J	S	560 2W Metal Oxide	AA	A
R 0611	RR-XZ0200BMZZ	S	1 1/2W Fuse Resistor	AB	A
R 0619	VRS-VV3AB561J	S	560 1W Metal Oxide	AA	A
R 0624	RR-XZ0200BMZZ	S	1 1/2W Fuse Resistor	AB	A
R 0626	VRS-VV3DB561J	S	560 2W Metal Oxide	AA	A
R 0638	VRS-VV3DB181J	S	180 2W Metal Oxide	AA	A
R 0640	RR-XZ0216BMZZ	S	22 1/2W Fuse Resistor	AB	A
R 0643	VRS-VV3DB222J	S	2.2K 2W Metal Oxide	AB	A
R 0702	VRS-VV3LB473J	S	47K 3W Metal Oxide	AC	A
R 0706	VRN-VV3ABR27J	J	0.27 1W Metal Film	AA	A
R 0716	VRS-TQ2BD473F	S	47K 1/8W Metal Oxide	AA	A
R 0718	VRS-TQ2BD473F	S	47K 1/8W Metal Oxide	AA	A
⚠ R 0721	VRC-UA2HG825K	S	8.2M 1/2W Solid	AA	A
⚠ R 0722	VRC-UA2HG825K	S	8.2M 1/2W Solid	AA	A
R 0746	VRN-VV3LB5R6J	S	5.6 3W Metal Film	AC	A
R 0747	VRN-VV3AB1R5J	S	1.5 1W Metal Film	AA	A
R 0802	VRS-TQ2BD473J	S	47K 1/8W Metal Oxide	AA	A
R 0803	VRS-TQ2BD184J	S	180K 1/8W Metal Oxide	AA	A

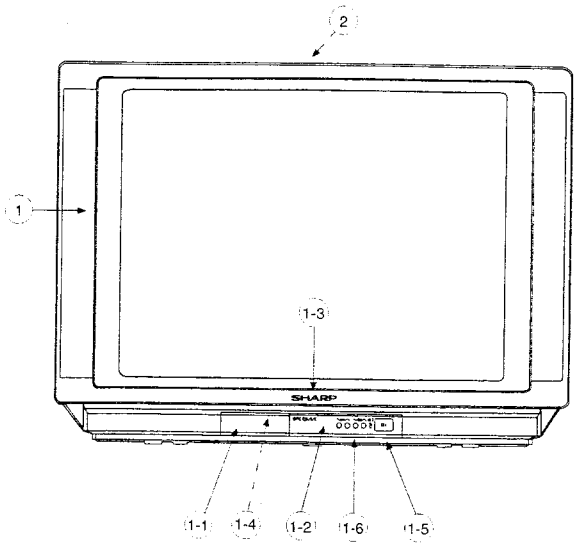
MISCELLANEOUS PARTS

REF. NO.	PARTS NO.	★	DESCRIPTION	CODE EX	CODE SP
⚠ S 0701	QSW-P0600BMZZ	S	Power Switch	AL	A
⚠ F 0701	QFS-C3226CEZZ	S	Fuse 3.15A 250V	AE	A
	QFSHD1018CEZZ	S	Fuse Holder	AA	A
	QFSHD1017CEZZ	S	Fuse Holder	AA	A
F 0601	QFS-J2521CEZZ	S	Fuse 2.5A 125V	AD	A
F 0602	QFS-J2521CEZZ	S	Fuse 2.5A 125V	AD	A
F 0702	QFS-J2521CEZZ	S	Fuse 2.5A 125V	AD	A
F 0703	QFS-J2521CEZZ	S	Fuse 2.5A 125V	AD	A
S 1001	QSW-K0079GEZZ	S	Switch	AB	A
S 1002	QSW-K0079GEZZ	S	Switch	AB	A
S 1003	QSW-K0079GEZZ	S	Switch	AB	A
S 1004	QSW-K0079GEZZ	S	Switch	AB	A
J 0301	QJAKJ0047CEZZ	S	Earphone Jack	AG	AD
	RRMCU0201BMZZ	S	R/C Receiver	AN	AG
LP 1001	RLAMP0001BMZZ	S	Neon	AC	A
FB 0201	RBLN-0037CEZZ	S	Ferrite Bead	AB	A
FB 0202	RBLN-0037CEZZ	S	Ferrite Bead	AB	A
FB 0601	RBLN-0037CEZZ	S	Ferrite Bead	AB	A
FB 0701	RBLN-0037CEZZ	S	Ferrite Bead	AB	A
FB 0702	RBLN-0037CEZZ	S	Ferrite Bead	AB	A
FB0703	RBLN-0037CEZZ	S	Ferrite Bead	AB	A
FB 0704	RBLN-0037CEZZ	S	Ferrite Bead	AB	A
FB 1001	RCORF0003GEZZ	S	Ferrite	AD	A
FB 1002	RCORF0003GEZZ	S	Ferrite	AD	A
J 0156	RBLN-0037CEZZ	S	Ferrite Bead	AB	A
(A))	QPLGN0304CEZZ	S	Connector	AB	A
(FH)	QPLGN0304CEZZ	S	Connector	AB	A
(FV)	QPLGN0304CEZZ	S	Connector	AB	A
(G)	QPLGN0207CEZZ	S	Connector	AA	A
(H)	QPLGN0441CEZZ	S	Connector 4pin	AB	A
(RGB)	QPLGN0441CEZZ	S	Connector 4pin	AB	A
(S)	QPLGN0441CEZZ	S	Connector 4pin	AB	A
(SV)	QSOCN1067BMZZ	S	Connector	AE	A
(VA)	QSOCN0284FJZZ	S	Socket 20pin	AG	A
(YA)	QSOCN0284FJZZ	S	Socket 20pin	AG	A
(YB)	QSOCN0284FJZZ	S	Socket 20pin	AG	A
	QSOCZ2051SC32	S	Socket 32pin (IC 1004)	AC	A

REF. NO.	PARTS NO.	★	DESCRIPTION	CODE EX	CODE SP
D 0323	RH-EX0481BMZZ	S	Zener BZX79 B5V6	AB	AA
D 0324	RH-EX0583BMZZ	S	Zener TZMBC5V6	AA	AA
D 0325	RH-EX0583BMZZ	S	Zener TZMBC5V6	AA	AA
D 0326	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0327	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0328	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0329	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0330	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0331	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0333	RH-EX0544BMZZ	S	Zener TZMC4V7	AA	AA
D 0334	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0335	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0336	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0337	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0405	RH-EX0550BMZZ	S	Zener TZMC8V2	AA	AA
D 0412	RH-EX0545BMZZ	S	Zener TZMC5V1	AA	AA
D 0413	RH-EX0548BMZZ	S	Zener TZMC6V8	AA	AA
D 0451	RH-EX0539BMZZ	S	Zener TZMC3V0	AA	AA
D 0501	RH-EX0549BMZZ	S	Zener TZMC7V5	AA	AA
D 0502	RH-EX0549BMZZ	S	Zener TZMC7V5	AA	AA
D 0503	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0504	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0505	RH-DX0590BMZZ	S	MBR1100RL	AE	AD
D 0507	RH-DX0590BMZZ	S	MBR1100RL	AE	AD
D 0508	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0509	RH-EX0538BMZZ	S	Zener TZMC2V7	AA	AA
D 0510	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0511	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0512	RH-DX0504BMZZ	S	1N4934	AB	AB
D 0513	RH-DX0501BMZZ	S	1N4004	AA	AA
D 0516	RH-EX0546BMZZ	S	Zener TZMC5V6	AA	AA
D 0517	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0518	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0519	RH-EX0549BMZZ	S	Zener TZMC7V5	AA	AA
D 0520	RH-EX0549BMZZ	S	Zener TZMC7V5	AA	AA
D 0601	RH-DX0505BMZZ	S	1N4935	AB	AB
D 0603	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0604	RH-DX0506BMZZ	S	1N4936	AB	AB
D 0605	RH-DX0585BMZZ	S	DMV32AF5	AM	AH
D 0607	RH-DX0505BMZZ	S	1N4935	AB	AB
D 0608	RH-DX0505BMZZ	S	1N4935	AB	AB
D 0609	RH-DX0589BMZZ	S	MBR3100RL	AF	AC
D 0610	RH-DX0589BMZZ	S	MBR3100RL	AF	AC
D 0611	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0613	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0616	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0617	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0618	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0619	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0620	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0621	RH-EX0554BMZZ	S	Zener TZMC12	AB	AA
D 0622	RH-EX0554BMZZ	S	Zener TZMC12	AB	AA
D 0623	RH-EX0568BMZZ	S	Zener TZMC47	AA	AA
D 0624	RH-DX0506BMZZ	S	1N4936	AB	AB
D 0701	RH-DX0555BMZZ	S	RF2005	AB	AA
D 0702	RH-DX0555BMZZ	S	RF2005	AB	AA
D 0703	RH-DX0555BMZZ	S	RF2005	AB	AA
D 0704	RH-DX0555BMZZ	S	RF2005	AB	AA
D 0705	RH-DX0539BMZZ	S	BYT52M	AC	AA
D 0706	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0707	RH-EX0546BMZZ	S	Zener TZMC5V6	AA	AA
D 0708	RH-DX0587BMZZ	S	MR826	AP	AH
D 0709	RH-DX0505BMZZ	S	1N4935	AB	AB
D 0710	RH-DX0588BMZZ	S	MBR360	AE	AC
D 0711	RH-DX0555BMZZ	S	RF2005	AB	AA
D 0712	RH-DX0565BMZZ	S	1N5822RL	AD	AC
D 0717	RH-EX0482BMZZ	S	Zener BZX79 B6V2	AA	AA
D 0718	RH-EX0556BMZZ	S	Zener TZMC15	AA	AA
D 0719	RH-DX0588BMZZ	S	MBR360	AE	AC
D 0720	RH-DX0045BMZZ	S	1N4148	AA	AA
D 0724	RH-DX0559BMZZ	S	BAS12	AC	AB
D 0725	RH-DX0559BMZZ	S	BAS12	AC	AB
D 0727	RH-DX0565BMZZ	S	1N5822RL	AD	AC
D 0728	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0729	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0730	RH-DX0551BMZZ	S	LL4148	AA	AA
D 0731	RH-EX0583BMZZ	S	Zener TZMBC5V6	AA	AA
D 1001	RH-EX0546BMZZ	S	Zener TZMC5V6	AA	AA
D 1002	RH-EX0546BMZZ	S	Zener TZMC5V6	AA	AA
D 1005	RH-EX0546BMZZ	S	Zener TZMC5V6	AA	AA
D 1006	RH-EX0546BMZZ	S	Zener TZMC5V6	AA	AA
D 1007	RH-EX0546BMZZ	S	Zener TZMC5V6	AA	AA
D 1008	RH-EX0546BMZZ	S	Zener TZMC5V6	AA	AA
D 1009	RH-EX0409BMZZ	S	Zener BZX79C5V6	AA	AA
D 1010	RH-DX0551BMZZ	S	LL4148	AA	AA
D 1011	RH-DX0045BMZZ	S	1N4148	AA	AA
D 1012	RH-DX0551BMZZ	S	LL4148	AA	AA
D 1013	RH-DX0551BMZZ	S	LL4148	AA	AA
D 1051	RH-PX0105BMZZ	S	LED	AC	AC
D 1052	RH-PX0105BMZZ	S	LED	AC	AC
D 1101	RH-EX0408BMZZ	S	Zener BZX79C5V1	AB	AB
D 1102	RH-DX0045BMZZ	S	1N4148	AA	AA
D 1103	RH-EX0545BMZZ	S	Zener TZMC5V1	AA	AA
D 1104	RH-EX0545BMZZ	S	Zener TZMC5V1	AA	AA
D 1105	RH-DX0045BMZZ	S	1N4148	AA	AA
D 1106	RH-DX0045BMZZ	S	1N4148	AA	AA
R 0734	RH-DX0045BMZZ	S	1N4148	AA	AA
			PACKADGED CIRCUITS		
⚠ PR 0701	RMPTP0028CEZZ	S	P.T.C.	AG	AC
X 0301	RCRSB0203BMZZ	S	Crystal 18.432 MHz	AG	AD
X 0451	RCRSB0214BMZZ	S	Crystal 20.48 MHz	AH	AE
X 1001	RCRSB0235BMZZ	S	Crystal 16 MHz	AF	AE
			COILS		
L 0202	VP-DF100K0000	S	10µH	AB	AB
L 0203	VP-CF470K0000	S	47µH	AB	AA
L 0205	RCILD0236BMZZ	S	Filter	AE	AD
L 0206	VP-NM1R0MR10N	S	1µHABAB0301	AB	AB
L 0301	VP-DF100K0000	S	10µH	AB	AB
L 0302	RCILP0236BMZZ	S	100µH	AQ	AL
L 0303	VP-DF3R3K0000	S	3.3µH	AB	AB
L 0304	RCILP0236BMZZ	S	100µH	AQ	AN
L 0405	VP-DF100K0000	S	10µH	AB	AB
L 0452	VP-DF3R3K0000	S	3.3µH	AB	AB
L 0501	RCILP0271BMZZ	S	400µH	AK	AE
L 0602	RCILZ0713BMZZ	S	Delay Line	AL	AE
L 0604	RCILF0158BMZZ	S	Coil	AL	AF
L 0605	RCILP0262BMZZ	S	5mH	AH	AE
L 0606	RCILP0243BMZZ	S	33µH	AD	AC
L 0607	VP-CF3R3K0000	S	3.3µH	AB	AB
L 0608	VP-CF3R3K0000	S	3.3µH	AB	AB
L 0609	RCILP0265BMZZ	S	1.5µH	AD	AC
⚠ L 0701	RCILF0108BMZZ	S	Main Filter	AL	AF
L 0702	RCILP0110CEZZ	S	3.3µH	AD	AD
L 0703	RCILP0110CEZZ	S	3.3µH	AD	AD
L 0704	VP-CF1R0M0000	S	1µH	AB	AA
L 0705	VP-CF1R0M0000	S	1µH	AB	AA
L 0706	VP-DF3R3K0000	S	3.3µH	AB	AB
L 0707	RCILP0213BMZZ	S	13.5µH	AF	AA
L 0708	VP-CF1R0M0000	S	1µH	AB	AA
L 0709	VP-CF1R0M0000	S	1µH	AB	AA
L 0710	RCILP0110CEZZ	S	3.3µH	AD	AD
L 0189	VP-XF100K0000	S	10µH	AB	AA
			CERAMIC FILTERS		
CF 0301	RFILC0020CEZZ	S	Filter 5.5 MHz (T5.5B)	AE	AE
CF 1001	RFILC0121GEZZ	S	Filter 8MHz	AD	AC
SF 0201	RFILC0281BMZZ	S	SAW Filter G3264K	AQ	AN
			TRANSFORMERS		
⚠ T 0601	RTRNF2041BMZZ	S	F.B.T.	BB	AZ
⚠ T 0701	RTRNZ0550BMZZ	S	Chopper	AV	AR

REF. NO.	PARTS NO.	★	DESCRIPTION	CODE EX	CODE SP
MISCELLANEOUS PARTS					
FB 6001	RBLN-0037CEZZ	S	Ferrite Bead	AB	AB
FB 6002	RBLN-0020CEZZ	S	Ferrite Bead	AB	AA
FB 6101	RBLN-0037CEZZ	S	Ferrite Bead	AB	AB
FB 6102	RCORF0003GEZZ	S	Ferrite	AD	AB
FB 6201	RCILP0110CEZZ	S	3.3µH	AD	AD
FB 6203	VP-DF1R0M0000	S	1µH	AB	AA
(CV)	QPLGN1141CEZZ	S	Connector	AC	AA
(KA)	QPLGN0641CEZZ	S	Connector	AB	AA
(RGB)	QPLGN0441CEZZ	S	Connector 4pin	AB	AB
(YA)	QPLGN0285FJZZ	S	Connector	AG	AD
(YB)	QPLGN0285FJZZ	S	Connector	AG	AD
PWB-D	**A / V Unit**				
INTEGRATED CIRCUITS					
IC 2400	RH-IX1624BMZZ	S	TEA6420	AP	AM
IC 2401	RH-IX1623BMZZ	S	TDA6920X	AN	AK
TRANSISTORS					
Q 2441	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 2446	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 2447	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 2448	VS2SC2412KQ-1	S	2SC2412	AA	AA
DIODES					
D 2401	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 2402	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 2403	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 2404	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 2406	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 2410	RH-EX0409BMZZ	S	Zener BZX79C5V6	AA	AA
D 2411	RH-EX0409BMZZ	S	Zener BZX79C5V6	AA	AA
D 3300	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 3301	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 3302	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 3303	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 3304	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 3305	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 3306	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 3307	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 3314	RH-EX0401BMZZ	S	Zener BZX79C2V7	AA	AA
D 3316	RH-EX0550BMZZ	S	Zener TZMC8V2	AA	AA
D 3317	RH-EX0550BMZZ	S	Zener TZMC8V2	AA	AA
COILS					
L 2401	VP-DF100K0000	S	10µH	AB	AB
L 2402	VP-XF1R0K0000	S	1µH	AB	AB
L 2403	VP-XF1R0K0000	S	1µH	AB	AB
CAPACITORS					
C 2401	RC-FZ9473BMNJ	J	0.047 63V Mylar	AC	AA
C 2402	VCCSTV1HL101J	S	100p 50V Ceramic	AA	AA
C 2403	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 2404	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 2405	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 2408	RC-FZ9473BMNJ	J	0.047 63V Mylar	AC	AA
C 2409	VCCSTV1HL101J	S	100p 50V Ceramic	AA	AA
C 2411	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 2422	RC-FZ9473BMNJ	J	0.047 63V Mylar	AC	AA
C 2428	VCEAEA1CW226M	S	22 16V Electrolytic	AB	AA
C 2434	VCEAEA1CW107M	S	100 16V Electrolytic	AB	AA
C 2438	VCEAEA1CW107M	S	100 16V Electrolytic	AB	AA

REF. NO.	PARTS NO.	★	DESCRIPTION	CODE EX	CODE SP
C 2440	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA
C 3302	VCEAEA1CW106M	S	10 16V Electrolytic	AB	AA
C 3303	VCEAEA1CW106M	S	10 16V Electrolytic	AB	AA
C 3306	VCEAEA1AW476M	S	47 10V Electrolytic	AB	AA
C 3307	VCEAEA1AW476M	S	47 10V Electrolytic	AB	AA
C 3308	VCEAEA1CW106M	S	10 16V Electrolytic	AB	AA
C 3309	VCEAEA1CW106M	S	10 16V Electrolytic	AB	AA
C 3314	VCEAEA1AW476M	S	47 10V Electrolytic	AB	AA
C 3315	VCEAEA1AW476M	S	47 0V Electrolytic	AB	AA
RESISTORS					
R 2449	RR-XZ0104BMZZ	S	2.2 1/3W Fuse Resistor	AB	AA
MISCELLANEOUS PARTS					
SC 2401	QSOCZ0108BMZZ	S	RGB Connector	AE	AC
SC 2402	QSOCZ0109BMZZ	S	RGB Connector	AE	AC
(CV)	QPLGN1142CEZZ	S	Connector	AD	AE
(VA)	QPLGN0285FJZZ	S	Connector	AG	AD
FB 3300	RBLN-0037CEZZ	S	Ferrite Bead	AB	AE
FB 3301	RBLN-0037CEZZ	S	Ferrite Bead	AB	AE
MISCELLANEOUS PARTS					
⚠	QACCZ2100BMSA	S	AC Cord	AR	AH
	VSP1306PB067S	S	Speaker 12W 8 ohms	AR	AN
	RRMCG1061BMSA	S	Remote Control Unit	AW	AS
	TINS-6471BMN0	S	Operation Manual 70DS15S	AR	AK
	TINS-6483BMN0	S	Operation Manual 70DS15SN	BB	AL
	TINS-6520BMN0	S	Operation Manual C7015S	AL	AF
CABINET PARTS					
1	CCABA1183BMV0	S	Front Cabinet 70DS15S	BH	AZ
1	CCABA1191BMV0	S	Front Cabinet 70DS15SN	BH	AZ
1	CCABA1207BMV0	S	Front Cabinet C 7015S		
1 - 1	GDORF1045BMSC	S	Door 70DS15S / 70DS15SN	AF	AE
1 - 1	GDORF1045BMSA	S	Door C7015S	AE	AD
1 - 2	GMADT1067BMSA	S	Window C7015S	AG	AE
1 - 3	HBDGB3013MESA	S	Badge SHARP	AG	AD
1 - 4	HINDP5076BMSA	S	Indicator	AE	AC
1 - 5	JBTN-1029BMSC	S	Button Power 70DS15S / 70DS15SN	AC	AE
1 - 5	JBTN-1029BMSA	S	Button Power C7015S	AC	AE
1 - 6	JBTN-1028BMSC	S	Button/Up Down 70DS15S / 70DS15SN	AE	AC
1 - 6	JBTN-1028BMSA	S	Button Up/Down C7015S	AC	AE
2	CCABB1061BMV0	S	Rear Cabinet 70DS15S / 70DS15SN	BH	BA
2	CCABB1061BMV1	S	Rear Cabinet C7015S		



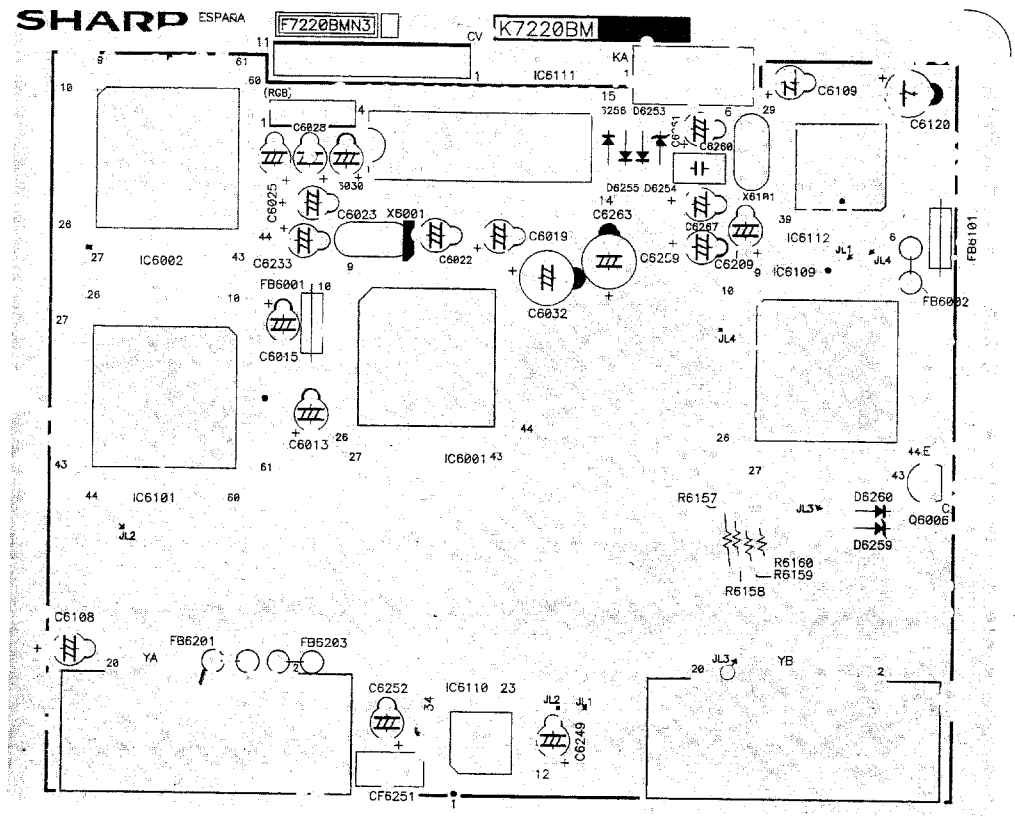
REF. NO.	PARTS NO.	★	DESCRIPTION	CODE EX	CODE SP
PWB-B	**SOCKET UNIT**				
	INTEGRATED CIRCUITS				
IC 1801	RH-IX1416BMZZ	S	TEA 5101A	AN	AF
	TRANSISTORS				
Q 1840	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 1841	VS2SA1037KQ-1	S	BC807	AA	AA
	DIODES				
D 1810	VHDDAN202K/-1	S	DAN 202K	AA	AA
D 1811	VHDDAN202K/-1	S	DAN 202K	AA	AA
D 1820	VHDDAN202K/-1	S	DAN 202K	AA	AA
D 1821	VHDDAN202K/-1	S	DAN 202K	AA	AA
D 1830	VHDDAN202K/-1	S	DAN 202K	AA	AA
D 1831	VHDDAN202K/-1	S	DAN 202K	AA	AA
D 1840	VHDDAN202K/-1	S	DAN 202K	AA	AA
D 1841	VHDDAN202K/-1	S	DAN 202K	AA	AA
D 1842	VHDDAN202K/-1	S	DAN 202K	AA	AA
	COILS				
L 1801	VP-CF3R3K0000	S	3.3µH	AB	AB
R 1871	VP-XF3R3K0000	S	3.3µH	AA	AA
	CAPACITORS				
C 1801	RC-KZ0029CEZZ	S	0.01 250V Ceramic	AC	AC
C 1802	VCEAGH2EW476M	S	47 250V Electrolytic	AE	AD
C 1805	RC-KZ0029CEZZ	S	0.01 250V Ceramic	AC	AC
C 1877	RC-KZ0023CEZZ	S	4700p 2KV Ceramic	AD	AD
C 1878	RC-FZ9334BMNJ	J	0.33 63V Myiar	AC	AA
	RESISTORS				
R 1813	VRC-MA2HG681J	S	680 1/2W Solid	AB	AA
R 1823	VRC-MA2HG681J	S	680 1/2W Solid	AB	AA
R 1833	VRC-MA2HG681J	S	680 1/2W Solid	AB	AA
R 1872	VRG-RL2HB221J	S	220 1/2W Fuse Resistor	AB	AB
R 1873	RR-XZ0017CEZZ	S	10 1/2W Fuse Resistor	AB	AB
R 1876	VRS-TQ2BD125J	S	1.2M 1/8W Metal Oxide	AA	AA
R 1877	VRS-TQ2BD125J	S	1.2M 1/8W Metal Oxide	AA	AA
R 1878	VRS-TQ2BD225J	S	2.2M 1/8W Metal Oxide	AA	AA
	MISCELLANEOUS PARTS				
⚠	QSOCV0919CEZZ	S	C.R.T. Socket	AM	AF
	QPLGN0641CEZZ	S	Connector	AB	AA
	QPLGN0441CEZZ	S	Connector 4pin	AB	AB
PWB-C	**100 Hz Unit**				
	INTEGRATED CIRCUITS				
IC 6001	RH-IX1616BMZZ	S	VPC3200A	BH	BE
IC 6002	RH-IX1625BMZZ	S	CIP3250A-PS-B1	BA	AY
IC 6101	RH-IX1621BMZZ	S	SDA9290	AZ	AX
IC 6102	RH-IX1618BMZZ	S	SDA9251	AZ	AX
IC 6103	RH-IX1618BMZZ	S	SDA9251	AZ	AX
IC 6104	RH-IX1618BMZZ	S	SDA9251	AZ	AX
IC 6109	RH-IX1620BMZZ	S	SDA9280	BD	BA
IC 6110	RH-IX1626BMZZ	S	SDA9362	AZ	AX
IC 6111	VHITDA4780/-1	S	TDA4780	AZ	AS
IC 6112	RH-IX1617BMZZ	S	SDA9220	AX	AT
	TRANSISTORS				
Q 6006	RH-TX0102BMZZ	S	BC338	AB	AA
Q 6007	VS2SC2412KQ-1	S	2SC2412	AA	AA
Q 6207	VS2SA1037KQ-1	S	BC807	AA	AA
Q 6253	VS2SA1037KQ-1	S	BC807	AA	AA
	DIODES				
D 6251	RH-EX0544BMZZ	S	Zener TZMC4V7	AA	AA
D 6252	RH-DX0551BMZZ	S	LL4148	AA	AA
D 6253	RH-DX0045BMZZ	S	1N4148	AA	AA
D 6254	RH-EX0410BMZZ	S	Zener BZX79C6V2	AB	AA
D 6255	RH-DX0045BMZZ	S	1N4148	AA	AA
D 6256	RH-DX0045BMZZ	S	1N4148	AA	AA
D 6257	RH-EX0544BMZZ	S	Zener TZMC4V7	AA	AA
D 6258	RH-DX0551BMZZ	S	LL4148	AA	AA
D 6259	RH-EX0413BMZZ	S	Zener BZX79C8V2	AB	AB
D 6260	RH-DX0045BMZZ	S	1N4148	AA	AA
D 6262	RH-DX0551BMZZ	S	LL4148	AA	AA
D 6263	RH-DX0551BMZZ	S	LL4148	AA	AA
	PACKADGED CIRCUITS				
X 6001	RCRSB0219BMZZ	S	Crystal 20.25 MHz	AH	AG
X 6101	RCRSB0234BMZZ	S	Crystal 6.75 MHz	AG	AE
	COILS				
L 6001	VP-NM2R2MR16N	S	2.2µH	AD	AB
L 6002	VP-NM2R2MR16N	S	2.2µH	AD	AB
L 6003	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6004	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6005	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6006	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6007	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6008	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6009	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6010	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6011	VP-NM100KR42N	S	10µH	AC	AB
L 6012	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6013	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6014	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6015	VP-NM1R0MR10N	S	1µH	AB	AB
L 6016	VP-NM1R0MR10N	S	1µH	AB	AB
L 6017	VP-NM1R0MR10N	S	1µH	AB	AB
L 6101	VP-NM100KR42N	S	10µH	AC	AB
L 6103	VP-NM100KR42N	S	10µH	AC	AB
L 6105	VP-NM1R0MR10N	S	1µH	AB	AB
L 6205	VP-NM100KR42N	S	10µH	AC	AB
L 6206	VP-NM100KR42N	S	10µH	AC	AB
L 6207	VP-NM100KR42N	S	10µH	AC	AB
L 6211	VP-NM100KR42N	S	10µH	AC	AB
L 6212	VP-NM1R0MR10N	S	1µH	AB	AB
L 6251	VP-NM3R3MR19N	S	3.3µH	AC	AC
L 6252	VP-NM100KR42N	S	10µH	AC	AB
	CERAMIC FILTERS				
CF 6251	RFILA0025CEZZ	S	Filter 12MHz	AG	AD
	CAPACITORS				
C 6013	VCEAGA1AW107M	S	100 10V Electrolytic	AA	AA
C 6015	VCEAGA1AW107M	S	100 10V Electrolytic	AA	AA
C 6032	VCEAGA0JW477M	S	470 6.3V Electrolytic	AB	AA
C 6108	VCEAGA0JW107M	S	100 6.3V Electrolytic	AA	AA
C 6120	VCEAGA1AW227M	S	220 10V Electrolytic	BA	AA
C 6209	VCEAGA0JW476M	S	47 6.3V Electrolytic	AA	AA
C 6233	VCEAGA0JW476M	S	47 6.3V Electrolytic	AA	AA
C 6263	VCEAGA1AW477M	S	470 10V Electrolytic	AB	AA

SHARP

RECICLED PAPER

PRINTED IN SPAIN

PRINTED WIRING BOARDS



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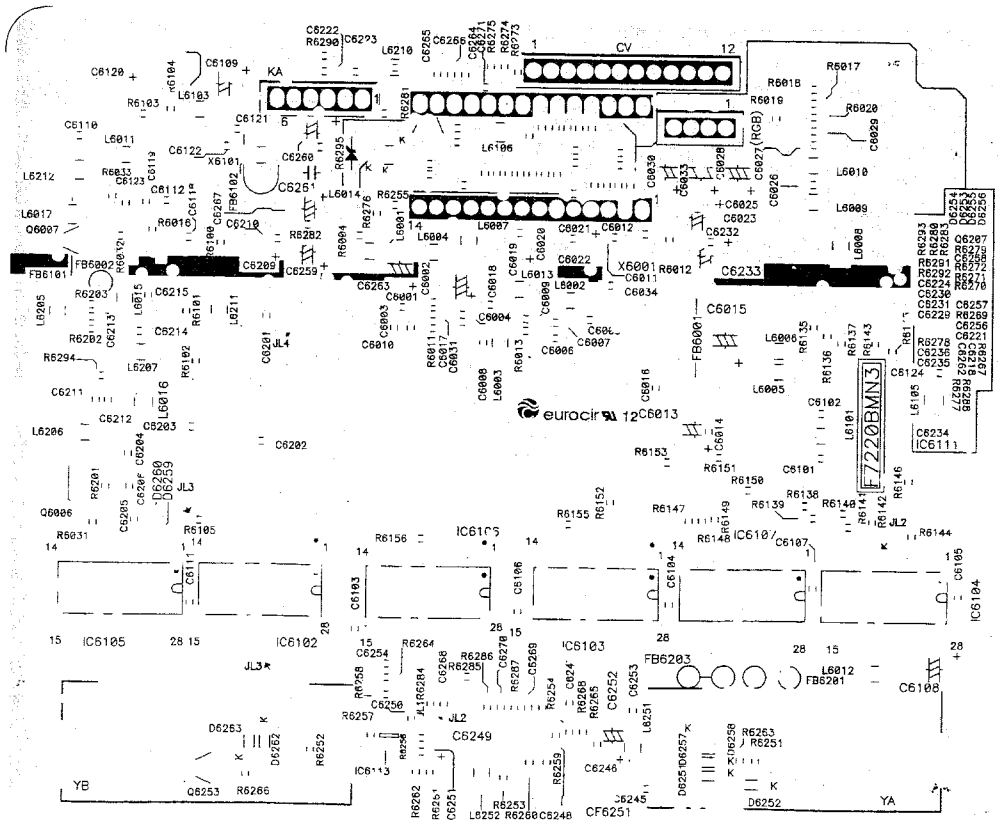

1/2 PWB-C

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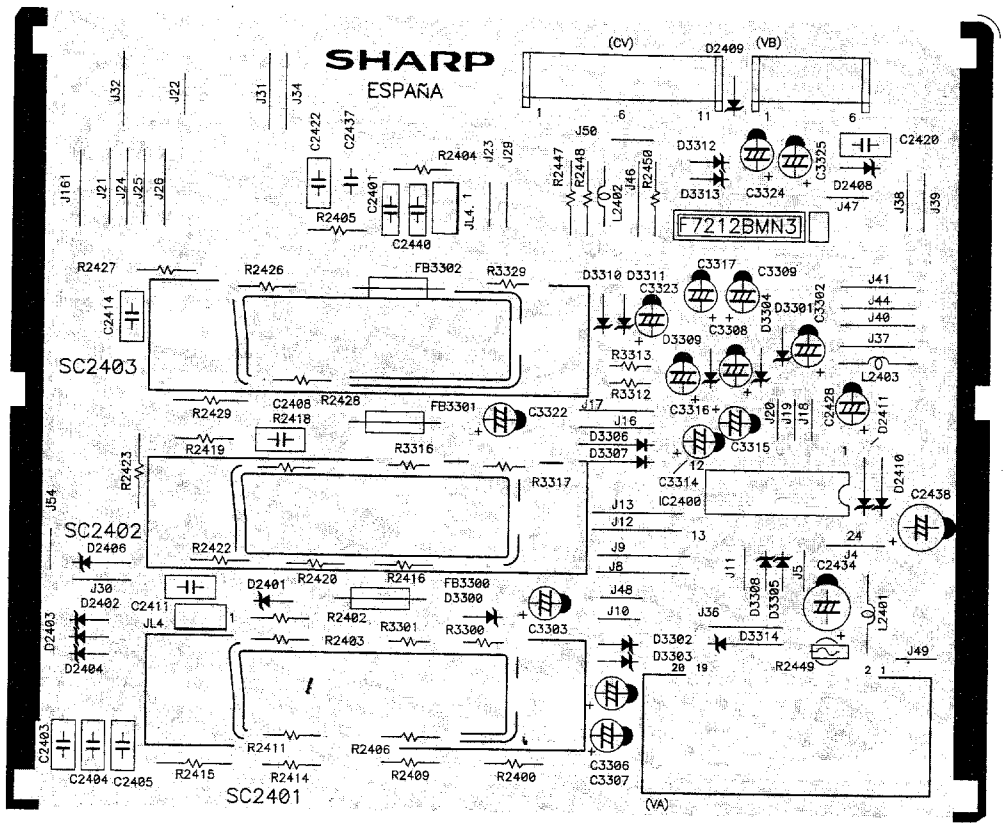

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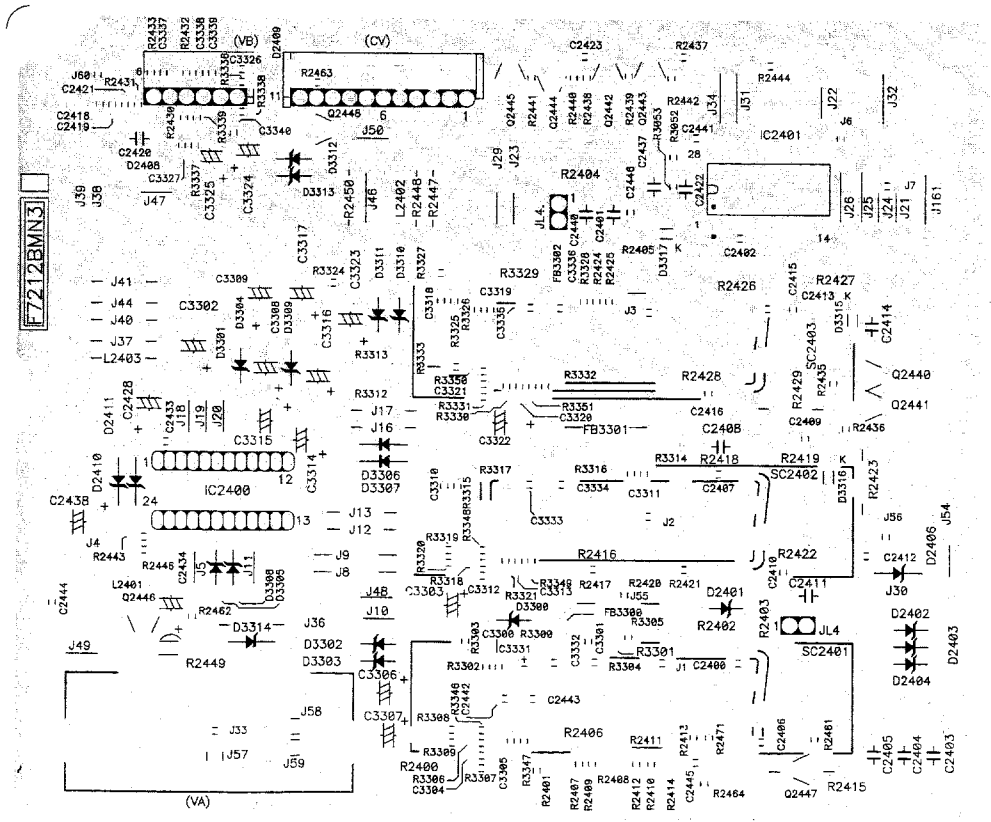

1/2 PWB-D